

**Iowa Department of Natural Resources
Final Title V Operating Permit**

Name of Permitted Facility: **Monsanto Company - Muscatine**
Facility Location: **2500 Wiggins Road**
 Muscatine, IA 52761
Air Quality Operating Permit Number: **04-TV-010**
Expiration Date: **07/26/09**

EQ Number: **92-6909**
Facility File Number: **70-01-008**

Responsible Official

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This permit is issued in accordance with 567 Iowa Administrative Code Chapter 22, and is issued subject to the terms and conditions contained in this permit.

For the Director of the Department of Natural Resources

Douglas A. Campbell, Supervisor of Air Operating Permits Section

Date

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Abbreviations

acfm.....	actual cubic feet per minute
CAA	Clean Air Act
CFR	Code of Federal Regulation
CE.....	control equipment
CEM	continuous emission monitor
°F	degrees Fahrenheit
EIQ	emissions inventory questionnaire
EP	emission point
EU.....	emission unit
gr./dscf.....	grains per dry standard cubic foot
gr./100 cf	grains per one hundred cubic feet
hp.....	horsepower
IAC	Iowa Administrative Code
IDNR	Iowa Department of Natural Resources
MACT	Maximum Available Control Technology
MVAC.....	motor vehicle air conditioner
NAICS	North American Industry Classification System
NSPS	new source performance standard
PAI	Pesticide Active Ingredient
POD.....	Point of Determination
ppmv.....	parts per million by volume
lb./hr	pounds per hour
lb./MMBtu.....	pounds per million British thermal units
SCC	Source Classification Codes
scfm	standard cubic feet per minute
SIC.....	Standard Industrial Classification
TPY	tons per year
USEPA	United States Environmental Protection Agency
VOL.....	Volatile Organic Liquid
mmHg.....	millimeters of Mercury

Pollutants

PM	particulate matter
PM ₁₀	particulate matter ten microns or less in diameter
SO ₂	sulfur dioxide
NO _x	nitrogen oxides
VOC	volatile organic compound
CO	carbon monoxide
HAP.....	hazardous air pollutant
HCl	Hydrochloric Acid

I. Facility Description and Equipment List

Facility Name: Monsanto Company - Muscatine

Permit Number: 04-TV-010

Facility Description: Pesticide Manufacturing (SIC 2879)

A-Unit Equipment List

Emission Point Number	Associated Emission Unit Number(s)	Associated Emission Unit Description
EP 3	EU-13-TK40	Technical Herbicide Storage Tank
EP 108	EU-13-004	MEA Storage Tank
EP 110	EU-13-053	Methanol Storage Tank
EP 113	EU-13-207	Azo Weigh Tank "A"
EP 114	EU-13-208	Azo Weigh Tank "B"
EP 115	EU-13-422	Washer Feed Tank
EP 121	EU-13-203	Step II Reactor "A"
	EU-13-204	Step II Reactor "B"
	EU-13-TK20	5 th Bay Sump
	EU-13-TK29	CMA Surge Tank
EP 122	EU-13-520	Mixer/Settler Fume Vent
EP 123	EU-13-483	NH ₄ Cl Recovery Process Dryer
EP 125	EU-13-534-1	Azo Incinerator/Scrubber System Natural Gas Combustion
	EU-13-534-2	Azo Incinerator/Scrubber System Azo Residue
	EU-13-514-2	Process Off-Gas
EP 126	EU-13-514-1	Step III Reactors
	EU-13-514-2	Process Off-Gas
EP 127	EU-13-FUG	A-Unit Fugitives
EP 176	EU-13-903	Step I Process
	EU-13-B6	CMA Drumming Fume Collector Blower
	EU-13-116	Finisher Recycle Surge Tank
	EU-13-120	Crude Azo Surge Tank
	EU-13-121	Crude Azo Charge Tank "A"
	EU-13-821	Crude Azo Charge Tank "B"
EP 198	EU-13-854	NH ₄ Cl Truck Silo
EP 242	EU-13-TK31	Formalin Storage Tank
EP 246	EU-13-TK46	Butanol Storage Tank
EP 280	EU-13-940	Technical Storage Tank "A"
EP 281	EU-13-943	Technical Storage Tank "B"

A-Unit Equipment List (cont.)

Emission Point Number	Associated Emission Unit Number(s)	Associated Emission Unit Description
EP 285	EU-13-946	Technical Storage Tank "C"
EP 358	EU-13-407	Dehydrator Hotwell
EP 364 EP 365	EU-13-393	Dehydrator "A"
	EU-13-394	Dehydrator "B"
	EU-13-425	Finished Goods Receiver
	EU-13-426	Finished Goods Receiver
EP 371	EU-13-101	Mixer/Settler #1
EP 372	EU-13-102	Mixer/Settler #2
EP 373	EU-13-103	Mixer/Settler #3
EP 374	EU-13-104	Mixer/Settler #4
EP 375	EU-13-105	Mixer/Settler #5
EP 376	EU-13-TK25	Mixer Settler #6
EP 377	EU-13-TK23	East 20% Ammonium Chloride Tank
EP 378	EU-13-TK22	West 20% Ammonium Chloride Tank
EP 379	EU-13-365	Resin Column Settling Tank
	EU-13-381	Resin Column Feed Tank
EP 381	EU-13-B5	CMA Drumming Exhaust Blower
EP 383	EU-13-477	Crystallizer Condensate Receiver
EP 384	EU-13-377	Water Collection Tank
EP 385	EU-13-480	Ammonium Chloride Centrifuge
EP 386	EU-13-494	Ammonium Chloride Redissolver

A-Unit Insignificant Equipment List

Insignificant Emission Unit Number	Insignificant Emission Unit Description
EU-13-TK15	Incinerator Feed Tank
EU-13-TK17	Step II DEB Surge Tank
EU-13-TK36	Lasso Storage Tank
EU-13-TK18	North Wastewater Pumpout Tank
EU-13-003	DEA Storage Tank
EU-13-522	Waste Collection Tank "B"
EU-13-584	Kerosene Storage Tank
EU-13-288	Ducon Venturi Scrubber Pump Tank
EU-13-782	Ethanol Storage Tank ⁽¹⁾
EU-13-784	Herbicide Storage Tank ⁽²⁾
EU-13-TK37	TEA Storage Tank ⁽³⁾
EU-13BF-1043	AZO Residue Drum Filling Ventilation Fan

⁽¹⁾ IDNR Construction permit 92-A-107 for this emission unit does not contain any specific terms or conditions, therefore the emission unit qualifies as an insignificant activity per 567 IAC 22.103.

⁽²⁾ IDNR Construction permit 92-A-109 for this emission unit does not contain any specific terms or conditions, therefore the emission unit qualifies as an insignificant activity per 567 IAC 22.103.

⁽³⁾ IDNR Construction permit 01-A-635 for this emission unit does not contain any specific terms or conditions, therefore the emission unit qualifies as an insignificant activity per 567 IAC 22.103.

Unit Services Equipment List

Emission Point Number	Associated Emission Unit Number(s)	Associated Emission Unit Description
EP 1	EU-13-TK-101	Wastewater Equalization Tank
EP 2	EU-13-TK-102	Wastewater Equalization Tank
EP 14	EU-2927-01-220	Wastewater Equalization Tank
EP 21	EU-1734-101	Boiler #5
EP 33	EU-2691-101-1	Boiler #6 Natural Gas Combustion
	EU-2691-101-2	Boiler #6 Fuel Oil Combustion
EP 45	EU-2691-100-1	Boiler #7 Natural Gas Combustion
	EU-2691-100-2	Boiler #7 Fuel Oil Combustion
EP 124	EU-2927-02-140	Lime Storage Silo
EP 129	EU-5-FUG-AGWT	Wastewater Treatment Plant Fugitives
EP 195	EU-3819-1-115-1	Boiler #8 Coal Combustion
	EU-3819-1-115-2	Boiler #8 Waste Treatment Sludge Combustion
EP 196A	EU-3819-1-132	Ash Handling System
EP 196B		
EP 196C		
EP 197	EU-3819-1-105	Coal Handling System
EP 184	EU-N-FAB-SHOP	North Welding Shop
EP 185	EU-N-FAB-SHOP	South Welding Shop
EP 226	EU-CAC-SHOP	CAC Welding Shop
EP 227	EU-AUNIT-SHOP	A-Unit Welding Shop
EP 228	EU-FORM-SHOP	Formulations Welding Shop
EP 229	EU-TECH-SHOP	Tech Welding Shop
EP 230	EU-MAIN-SHOP	Main Welding Shop
EP 231	EU-MAIN-SHOP2	Main Welding Shop Vent 2
EP 232	EU-SHAW-SHOP	Shaw Welding Shop
EP 233	EU-EI-SHOP	E&I Welding Shop
EP 287	EU-5-0295	#2 Fuel Oil Storage Tank
EP 324	EU-FS-01	Gasoline Storage Tank
EP 325	EU-FS-02	Diesel Fuel Storage Tank
EP 390	EU-15-CNP	Trim Pit

Unit Services Insignificant Equipment List

Insignificant Emission Unit Number	Insignificant Emission Unit Description
EU-FT-1P-15	Fire Training Diesel Pump
EU-NGF	19 Natural Gas Furnaces (0.08 – 0.2 MMBtu/hr)
EU-LPF	2 Liquid Propane Furnaces (0.13 & 0.15 MMBtu/hr)
EU-LPSH	5 Liquid Propane Space Heaters (0.04 MMBtu/hr)
EU-NGWH	4 Natural Gas Water Heaters (0.03 – 0.05 MMBtu/hr)
EU-NGSH	23 Natural Gas Space Heaters (0.075 – 0.25 MMBtu/hr)
EU-2691-03-100	#2 Emergency Fire Water Pump, North
EU-2691-03-101	#2 Emergency Fire Water Pump, North
EU-5-1P-203	#1 Emergency Fire Water Pump, North
EU-5-1P-204	#1 Emergency Fire Water Pump, South
EU-5-0328	#3 Emergency Fire Water Pump, East
EU-5-0325	#3 Emergency Fire Water Pump, West
EU-ECC-GEN-1	Emergency Control Center Generator
EU-5-15-FN-01	Wastewater Treatment Plant Building Sump

II. Plant-Wide Conditions

Facility Name: Monsanto Company - Muscatine
Permit Number: 04-TV-010

Permit conditions are established in accord with 567 Iowa Administrative Code rule 22.108

Permit Duration

The term of this permit is: Five Years
Commencing on: 7/27/04
Ending on: 7/26/09

Amendments, modifications and reopenings of the permit shall be obtained in accordance with 567 Iowa Administrative Code rules 22.110 - 22.114. Permits may be suspended, terminated, or revoked as specified in 567 Iowa Administrative Code Rules 22.115.

Multiple Title V Permits

Monsanto Company has applied for three Title V permits for their Muscatine facility. The facility will be considered as a whole with regard to applicability of various air permitting programs. This permit covers two process areas at the facility: the A-Unit and the Unit Services.

- The A-Unit produces acetochlor, alachlor, and butachlor from CAC.
- The Unit Services area includes utilities and waste treatment activities at the facility.

Other Title V Permits

IDNR has issued the first permit to cover the CAC Unit, the ETFAA Unit, the GT Unit, and the Multipurpose Unit (Title V permit #04-TV-002).

- The CAC Unit produces the herbicide intermediate chloroacetyl chloride (CAC). CAC is used at the facility to produce alachlor, acetochlor, butachlor, and propachlor.
- The ETFAA Unit produces ethyl 4,4,4-trifluoroacetoacetate (ETFAA), an intermediate used in the production of the pyridine family of herbicides. The facility was sold to Rohm and Haas in 1994 and then to Dow Agrosiences in 2000. Monsanto operates the ETFAA facility for Dow.
- The Glyphosate Technical (GT) Unit produces two salts of glyphosate: amine salt and potassium salt. These salt solutions are considered herbicide active ingredients.

- The Multipurpose Unit produces two products on a campaign basis. Part of the year, the unit may produce propachlor, a herbicide active ingredient, and n-isopropylaniline (NIPA), an intermediate used in the propachlor process. Other times during the year, the unit may produce MON 13900 (furalazole), a seed safener that is blended with acetochlor for use by Monsanto's formulation facilities. The products cannot be made simultaneously. This unit may also be used to produce the herbicide metolachlor using a process similar to that used for propachlor production.

IDNR has issued the second permit to cover the Flowable Formulations and Liquid Formulations Units at this facility (Title V permit #04-TV-006).

- The Flowable Formulations are typically water-based liquid herbicide formulations consisting of herbicide technical ingredients and other herbicide additives. Both microencapsulated and non-microencapsulated formulations are produced.
- The Liquid Formulations area formulates, packages, and ships herbicides as emulsifiable concentrates, herbicide technical active ingredients, and formulated herbicide premixes. The Liquid Formulations Facility packages and ships products in jugs, drums, shuttles, and mini-bulk containers. There are also facilities for providing bulk shipment of products in rail cars or tank trucks.

Emission Limits

Unless specified otherwise in the Emission Point-Specific Conditions, the following limitations and supporting regulations apply to all emission points at this plant:

Opacity (visible emissions): 40% opacity

Authority for Requirement: 567 IAC 23.3(2)"d"

Sulfur Dioxide (SO₂): 500 parts per million by volume

Authority for Requirement: 567 IAC 23.3(3)"e"

Particulate Matter (state enforceable only)¹:

No person shall cause or allow the emission of particulate matter from any source in excess of the emission standards specified in this chapter, except as provided in 567 – Chapter 24. For sources constructed, modified or reconstructed after July 21, 1999, the emission of particulate matter from any process shall not exceed an emission standard of 0.1 grain per dry standard cubic foot of exhaust gas, except as provided in 567 – 21.2(455B), 23.1(455B), 23.4(455B) and 567 – Chapter 24.

For sources constructed, modified or reconstructed prior to July 21, 1999, the emission of particulate matter from any process shall not exceed the amount determined from Table I, or amount specified in a permit if based on an emission standard of 0.1 grain per standard cubic foot of exhaust gas or established from standards provided in 23.1(455B) and 23.4(455B).

Authority for Requirement: 567 IAC 23.3(2)"a" (as revised 7/21/1999)

¹ Pending approval into Iowa's State Implementation Plan (SIP), paragraph 567 IAC 23.3(2)"a" (as revised 7/21/1999) is considered *state enforceable only*.

Particulate Matter²:

The emission of particulate matter from any process shall not exceed the amount determined from Table I, except as provided in 567 — 21.2(455B), 23.1(455B), 23.4(455B) and 567 — Chapter 24. If the director determines that a process complying with the emission rates specified in Table I is causing or will cause air pollution in a specific area of the state, an emission standard of 0.1 grain per standard cubic foot of exhaust gas may be imposed.

Authority for Requirement: 567 IAC 23.3(2)"a" (prior to 7/21/1999)

Fugitive Dust: Attainment and Unclassified Areas - No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved public roads, without taking reasonable precautions to prevent particulate matter in quantities sufficient to create a nuisance, as defined in Iowa Code section 657.1, from becoming airborne. All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. The highway authority shall be responsible for taking corrective action in those cases where said authority has received complaints of or has actual knowledge of dust conditions which require abatement pursuant to this subrule. Reasonable precautions may include, but not limited to, the following procedures.

1. Use, where practical, of water or chemicals for control of dusts in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
2. Application of suitable materials, such as but not limited to asphalt, oil, water or chemicals on unpaved roads, material stockpiles, race tracks and other surfaces which can give rise to airborne dusts.
3. Installation and use of containment or control equipment, to enclose or otherwise limit the emissions resulting from the handling and transfer of dusty materials, such as but not limited to grain, fertilizers or limestone.
4. Covering at all times when in motion, open-bodied vehicles transporting materials likely to give rise to airborne dusts.
5. Prompt removal of earth or other material from paved streets or to which earth or other material has been transported by trucking or earth-moving equipment, erosion by water or other means.

Authority for Requirement: 567 IAC 23.3(2)"c"

² Paragraph 567 IAC 23.3(2)"a" (prior to 7/21/1999) is the general particulate matter emission standard currently in the Iowa SIP.

Compliance Plan

The owner/operator shall comply with the applicable requirements listed below. The compliance status is based on information provided by the applicant.

Unless otherwise noted in the 112(j) statement below or in Section III of this permit, Monsanto Company - Muscatine is in compliance with all applicable requirements and shall continue to comply with all such requirements. For those applicable requirements which become effective during the permit term, Monsanto Company - Muscatine shall comply with such requirements in a timely manner.

Authority for Requirement: 567 IAC 22.108(15)

40 CFR 63 Subpart FFFF Requirements

Parts of this facility will be subject to the Miscellaneous Organic Chemical Manufacturing and Miscellaneous Coating Manufacturing (MON) MACT. This MACT was published in the Federal Register on November 10, 2003. All existing emission units subject to this MACT must demonstrate compliance with all applicable requirements no later than November 10, 2006. Any new affected sources constructed after November 10, 2003 must be able to demonstrate compliance with all applicable requirements upon startup of that equipment.

Initial Notifications 40 CFR 63.2515:

- If an affected source is started up before November 10, 2003, an initial notification must be submitted within 120 calendar days after November 10, 2003.
- If an affected source is started up after November 10, 2003, an initial notification must be submitted within 120 calendar days after the source becomes subject to this subpart.

Precompliance Report 40 CFR 63.2520(c):

- A Precompliance Report may be required to request approval for items 63.2520(c)(1) – (7). If a Precompliance Report is required, it must be submitted six (6) months prior to the compliance date for existing affected sources, or for new sources, upon application for approval of construction or reconstruction.

Authority for Requirement: 40 CFR Part 63 Subpart FFFF

40 CFR 63 Subpart MMM Requirements

The A-Unit covered by this permit is subject to the Pesticide Active Ingredient (PAI) MACT. Requirements that are specific to certain equipment have been included in the Emission Point-Specific Conditions section of this permit. Some of the more general requirements are listed below.

In case of any discrepancies between this permit and the MACT requirements in the most current CFR, those in the CFR shall apply.

63.1364 Compliance dates.

(a) *Compliance dates for existing sources.*

(1) An owner or operator of an existing affected source must comply with the provisions in this subpart by December 23, 2003.

(2) Pursuant to section 112(i)(3)(B) of the CAA, an owner or operator of an existing source may request an extension of up to 1 additional year to comply with the provisions of this subpart if the additional time is needed for the installation of controls.

(i) For purposes of this subpart, a request for an extension shall be submitted no later than 120 days prior to the compliance date specified in paragraph (a)(1) of this section, except as provided in paragraph (a)(2)(ii) of this section. The dates specified in § 63.6(i) of subpart A of this part for submittal of requests for extensions shall not apply to sources subject to this subpart.

(ii) An owner or operator may submit a compliance extension request after the date specified in paragraph (a)(2)(i) of this section provided the need for the compliance extension arose after that date and before the otherwise applicable compliance date, and the need arose due to circumstances beyond reasonable control of the owner or operator. This request shall include the data described in § 63.6(i)(8)(A), (B), and (D) of subpart A of this part.

(b) *Compliance dates for new and reconstructed sources.* An owner or operator of a new or reconstructed affected source must comply with the provisions of this subpart on June 23, 1999 or upon startup, whichever is later.

63.1367 Recordkeeping requirements.

(a) Requirements of subpart A of this part. The owner or operator of an affected source shall comply with the recordkeeping requirements in subpart A of this part as specified in Table 1 of this subpart³ and in paragraphs (a)(1) through (5) of this section.

(1) Data retention. Each owner or operator of an affected source shall keep copies of all records and reports required by this subpart for at least 5 years, as specified in §63.10(b)(1) of subpart A of this part.

(2) Records of applicability determinations. The owner or operator of a stationary source that is not subject to this subpart shall keep a record of the applicability determination, as specified in § 63.10(b)(3) of subpart A of this part.

(3) Startup, shutdown, and malfunction plan. The owner or operator of an affected source shall develop and implement a written startup, shutdown, and malfunction plan as specified in § 63.6(e)(3) of subpart A of this part. This plan shall describe, in detail, procedures for operating and maintaining the affected source during periods of startup, shutdown, and malfunction and a program for corrective action for a malfunctioning process, air pollution control, and monitoring equipment used to comply with this subpart. The owner or operator of an affected source shall keep the current and superseded versions of this plan onsite, as specified in § 63.6(e)(3)(v) of subpart A of this part. The owner or operator shall keep the startup, shutdown, and malfunction records specified in paragraphs (a)(3)(i) through (iii) of this section. Reports related to the plan shall be submitted as specified in § 63.1368(i).

(i) The owner or operator shall record the occurrence and duration of each malfunction of the process operations or of air pollution control equipment used to comply with this subpart, as specified in § 63.6(e)(3)(iii).

³ Table 1 of 40 CFR 63 Subpart MMM is included in this permit as Appendix D.

(ii) The owner or operator shall record the occurrence and duration of each malfunction of continuous monitoring systems used to comply with this subpart.

(iii) For each startup, shutdown, or malfunction, the owner or operator shall record all information necessary to demonstrate that the procedures specified in the affected source's startup, shutdown, and malfunction plan were followed, as specified in § 63.6(e)(3)(iii) of subpart A of this part; alternatively, the owner or operator shall record any actions taken that are not consistent with the plan, as specified in § 63.6(e)(3)(iv) of subpart A of this part.

(4) Recordkeeping requirements for sources with continuous monitoring systems. The owner or operator of an affected source who installs a continuous monitoring system to comply with the alternative standards in § 63.1362(b)(6) or (c)(4) shall maintain records specified in § 63.10(c)(1) through (14) of subpart A of this part.

(5) Application for approval of construction or reconstruction. For new affected sources, each owner or operator shall comply with the provisions regarding construction and reconstruction in § 63.5 of subpart A of this part.

63.1368 Reporting requirements.

(a) The owner or operator of an affected source shall comply with the reporting requirements of paragraphs (b) through (l) of this section. The owner or operator shall also comply with applicable paragraphs of § 63.9 and 63.10 of subpart A of this part, as specified in Table 1 of this subpart.

(b) Initial notification. The owner or operator shall submit the applicable initial notification in accordance with § 63.9(b) or (d) of subpart A of this part.

(c) Application for approval of construction or reconstruction. The owner or operator who is subject to § 63.5(b)(3) of subpart A of this part shall submit to the Administrator an application for approval of the construction of a new major source, the reconstruction of a major affected source, or the reconstruction of a major affected source subject to the standards. The application shall be prepared in accordance with § 63.5(d) of subpart A of this part.

(d) Notification of continuous monitoring system performance evaluation. An owner or operator who is required by the Administrator to conduct a performance evaluation for a continuous monitoring system that is used to comply with the alternative standard in § 63.1362(b)(6) or (c)(4) shall notify the Administrator of the date of the performance evaluation as specified in § 63.8(e)(2) of subpart A of this part.

(e) Precompliance plan. The Precompliance plan shall be submitted at least 3 months prior to the compliance date of the standard. For new sources, the Precompliance plan shall be submitted to the Administrator with the application for approval of construction or reconstruction. The Administrator shall have 90 days to approve or disapprove the Precompliance plan. The Precompliance plan shall be considered approved if the Administrator either approves it in writing, or fails to disapprove it in writing within the 90-day time period. The 90-day period shall begin when the Administrator receives the Precompliance plan. If the Precompliance plan is disapproved, the owner or operator must still be in compliance with the standard by the compliance date. To change any of the information submitted in the Precompliance plan, the owner or operator shall notify the Administrator at least 90 days before the planned change is to be implemented; the change shall be considered approved if the Administrator either approves the change in writing, or fails to disapprove the change in writing within 90 days of receipt of the change. The Precompliance plan shall include the information specified in paragraphs (e)(1) through (6) of this section.

- (1) Requests for approval to use alternative monitoring parameters or requests to set monitoring parameters according to § 63.1366(b)(4).
 - (2) Descriptions of the daily or per batch demonstrations to verify that control devices subject to § 63.1366(b)(1)(i) are operating as designed.
 - (3) Data and rationale used to support the parametric monitoring level(s) that are set according to § 63.1366(b)(3)(ii)(B).
 - (4) For owners and operators complying with the requirements of § 63.1362(g), the pollution prevention demonstration summary required in § 63.1365(g)(1).
 - (5) Data and rationale used to support an engineering assessment to calculate uncontrolled emissions from process vents as required in § 63.1365(c)(2)(ii).
 - (6) For fabric filters that are monitored with bag leak detectors, an operation and maintenance plan that describes proper operation and maintenance procedures, and a corrective action plan that describes corrective actions to be taken, and the timing of those actions, when the particulate matter concentration exceeds the setpoint and activates the alarm.
- (f) Notification of compliance status report. The Notification of Compliance Status report required under § 63.9(h) shall be submitted no later than 150 calendar days after the compliance date and shall include the information specified in paragraphs (f)(1) through (9) of this section.
- (1) The results of any applicability determinations, emission calculations, or analyses used to identify and quantify HAP emissions from the affected source.
 - (2) The results of emissions profiles, performance tests, engineering analyses, design evaluations, or calculations used to demonstrate compliance. For performance tests, results should include descriptions of sampling and analysis procedures and quality assurance procedures.
 - (3) Descriptions of monitoring devices, monitoring frequencies, and the values of monitored parameters established during the initial compliance determinations, including data and calculations to support the levels established.
 - (4) Operating scenarios.
 - (5) Descriptions of absolute or hypothetical peak-case operating and/or testing conditions for control devices.
 - (6) Identification of emission points subject to overlapping requirements described in § 63.1360(i) and the authority under which the owner or operator will comply, and identification of emission sources discharging to devices described by § 63.1362(l).
 - (7) Anticipated periods of planned routine maintenance during which the owner or operator would not be in compliance with the provisions in § 63.1362(c)(1) through (4).
 - (8) Percentage of total production from a PAI process unit that is anticipated to be produced for use as a PAI in the 3 years after either June 23, 1999 or startup, whichever is later.
 - (9) Records of the initial process units used to create each process unit group, if applicable.
- (g) Periodic reports. The owner or operator shall prepare Periodic reports in accordance with paragraphs (g)(1) and (2) of this section and submit them to the Administrator.
- (1) Submittal schedule. Except as provided in paragraphs (g)(1)(i) and (ii) of this section, the owner or operator shall submit Periodic reports semiannually. The first report shall be submitted no later than 240 days after the date the Notification of Compliance Status report is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status report is due. Each subsequent Periodic report shall cover the 6-month period following the preceding period and shall be submitted no later than 60 days after the end of the applicable period.
 - (i) The Administrator may determine on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the affected source.

- (ii) Quarterly reports shall be submitted when the monitoring data are used to comply with the alternative standards in § 63.1362(b)(6) or (c)(4) and the source experiences excess emissions. Once an affected source reports excess emissions, the affected source shall follow a quarterly reporting format until a request to reduce reporting frequency is approved. If an owner or operator submits a request to reduce the frequency of reporting, the provisions in § 63.10(e)(3) (ii) and (iii) of subpart A of this part shall apply, except that the term "excess emissions and continuous monitoring system performance report and/or summary report" shall mean "Periodic report" for the purposes of this section.
- (2) Content of periodic report. The owner or operator shall include the information in paragraphs (g)(2)(i) through (xii) of this section, as applicable.
- (i) Each Periodic report must include the information in § 63.10(e)(3)(vi)(A) through (M) of subpart A of this part, as applicable.
- (ii) If the total duration of excess emissions, parameter exceedances, or excursions for the reporting period is 1 percent or greater of the total operating time for the reporting period, or the total continuous monitoring system downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the Periodic report must include the information in paragraphs (g)(2)(ii)(A) through (D) of this section.
- (A) Monitoring data, including 15-minute monitoring values as well as daily average values of monitored parameters, for all operating days when the average values were outside the ranges established in the Notification of Compliance Status report or operating permit.
- (B) Duration of excursions, as defined in § 63.1366(b)(7).
- (C) Operating logs and operating scenarios for all operating days when the values are outside the levels established in the Notification of Compliance Status report or operating permit.
- (D) When a continuous monitoring system is used, the information required in § 63.10(c)(5) through (13) of subpart A of this part.
- (iii) For each vapor collection system or closed vent system with a bypass line subject to § 63.1362(j)(1), records required under § 63.1366(f) of all periods when the vent stream is diverted from the control device through a bypass line. For each vapor collection system or closed vent system with a bypass line subject to § 63.1362(j)(2), records required under § 63.1366(f) of all periods in which the seal mechanism is broken, the bypass valve position has changed, or the key to unlock the bypass line valve was checked out.
- (iv) The information in paragraphs (g)(2)(iv)(A) through (D) of this section shall be stated in the Periodic report, when applicable.
- (A) No excess emissions.
- (B) No exceedances of a parameter.
- (C) No excursions.
- (D) No continuous monitoring system has been inoperative, out of control, repaired, or adjusted.
- (v) For each storage vessel subject to control requirements:
- (A) Actual periods of planned routine maintenance during the reporting period in which the control device does not meet the specifications of § 63.1362(c)(5); and
- (B) Anticipated periods of planned routine maintenance for the next reporting period.
- (vi) For each PAI process unit that does not meet the definition of primary use, the percentage of the production in the reporting period produced for use as a PAI.
- (viii) Updates to the corrective action plan.
- (ix) Records of process units added to each process unit group, if applicable.

- (x) Records of redetermination of the primary product for a process unit group.
 - (xi) For each inspection conducted in accordance with § 63.1366(h)(2) or (3) during which a leak is detected, the records specify in § 63.1367(h)(4) must be included in the next Periodic report.
 - (xii) If the owner or operator elects to comply with the provisions of § 63.1362(c) by installing a floating roof, the owner or operator shall submit the information specified in § 63.122(d) through (f) as applicable. References to § 63.152 in § 63.122 shall not apply for the purposes of this subpart.
- (h) Notification of process change.
- (1) Except as specified in paragraph (h)(2) of this section, whenever a process change is made, or any of the information submitted in the Notification of Compliance Status report changes, the owner or operator shall submit the information specified in paragraphs (h)(1)(i) through (iv) of this section with the next Periodic report required under paragraph (g) of this section. For the purposes of this section, a process change means the startup of a new process, as defined in § 63.1361.
 - (i) A brief description of the process change;
 - (ii) A description of any modifications to standard procedures or quality assurance procedures;
 - (iii) Revisions to any of the information reported in the original Notification of Compliance Status report under paragraph (f) of this section; and
 - (iv) Information required by the Notification of Compliance Status report under paragraph (f) of this section for changes involving the addition of processes or equipment.
 - (2) The owner or operator must submit a report 60 days before the scheduled implementation date of either of the following:
 - (i) Any change in the activity covered by the Precompliance report.
 - (ii) A change in the status of a control device from small to large.
- (i) Reports of startup, shutdown, and malfunction. For the purposes of this subpart, the startup, shutdown, and malfunction reports shall be submitted on the same schedule as the Periodic reports required under paragraph (g) of this section instead of the schedule specified in § 63.10(d)(5)(i) of subpart A of this part. These reports shall include the information specified in § 63.1367(a)(3)(i) through (iii) and shall contain the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy. Reports are only required if a startup, shutdown, or malfunction occurred during the reporting period. Any time an owner or operator takes an action that is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator shall submit an immediate startup, shutdown, and malfunction report as specified in § 63.10(d)(5)(ii) of subpart A of this part.
- (j) Reports of equipment leaks. The owner or operator of an affected source subject to the standards in § 63.1363, shall implement the reporting requirements specified in § 63.1363(h). Copies of all reports shall be retained as records for a period of 5 years, in accordance with the requirements of § 63.10(b)(1) of subpart A of this part.
- (k) Reports of emissions averaging. The owner or operator of an affected source that chooses to comply with the requirements of § 63.1362(h) shall submit all information as specified in § 63.1367(d) for all emission points included in the emissions average. The owner or operator shall also submit to the Administrator all information specified in paragraph (g) of this section for each emission point included in the emissions average.
- (1) The reports shall also include the information listed in paragraphs (k)(1)(i) through (iv) of this section:

- (i) Any changes to the processes, storage tanks, or waste management unit included in the average.
 - (ii) The calculation of the debits and credits for the reporting period.
 - (iii) Changes to the Emissions Averaging Plan which affect the calculation methodology of uncontrolled or controlled emissions or the hazard or risk equivalency determination.
 - (iv) Any changes to the parameters monitored according to § 63.1366(g).
- (2) Every second semiannual or fourth quarterly report, as appropriate, shall include the results according to § 63.1367(d)(4) to demonstrate the emissions averaging provisions of § 63.1362(h), § 63.1365(h), § 63.1366(g), and § 63.1367(d) are satisfied.
- (l) Reports of heat exchange systems. The owner or operator of an affected source subject to the requirements for heat exchange systems in § 63.1362(f) shall submit information about any delay of repairs as specified in § 63.104(f)(2) of subpart F of this part, except that when the phrase "periodic reports required by § 63.152(c) of subpart G of this part" is referred to in § 63.104(f)(2) of subpart F of this part, the periodic reports required in paragraph (g) of this section shall apply for the purposes of this subpart.
- (m) Notification of performance test and test Plan. The owner or operator of an affected source shall notify the Administrator of the planned date of a performance test at least 60 days before the test in accordance with § 63.7(b) of subpart A of this part. The owner or operator also must submit the test Plan required by § 63.7(c) of subpart A of this part and the emission profile required by § 63.1365(b)(11)(iii) with the notification of the performance test.
- (n) Request for extension of compliance. The owner or operator may submit to the Administrator a request for an extension of compliance in accordance with § 63.1364(a)(2).
- (o) The owner or operator who submits an operating permit application before the date the Emissions Averaging Plan is due shall submit the information specified in paragraphs (o)(1) through (3) of this section with the operating permit application instead of the Emissions Averaging Plan.
- (1) The information specified in § 63.1367(d) for emission points included in the emissions average;
 - (2) The information specified in § 63.9(h) of subpart A of this part, as applicable; and
 - (3) The information specified in paragraph (e) of this section, as applicable.

Authority for Requirement: 567 IAC 23.1(4)"bm"
40 CFR 63, Subpart MMM

III. Emission Point-Specific Conditions

Facility Name: Monsanto Company – Muscatine

Permit Number: **04-TV-010**

A-Unit

Emission Point Number	Associated Emission Unit Number(s)	Associated Emission Unit Description
EP 3	EU-13-TK40	Technical Herbicide Storage Tank
EP 108	EU-13-004	MEA Storage Tank
EP 110	EU-13-053	Methanol Storage Tank
EP 113	EU-13-207	Azo Weigh Tank "A"
EP 114	EU-13-208	Azo Weigh Tank "B"
EP 115	EU-13-422	Washer Feed Tank
EP 121	EU-13-203	Step II Reactor "A"
	EU-13-204	Step II Reactor "B"
	EU-13-TK20	5 th Bay Sump
	EU-13-TK29	CMA Surge Tank
EP 122	EU-13-520	Mixer/Settler Fume Vent
EP 123	EU-13-483	NH ₄ Cl Recovery Process Dryer
EP 125	EU-13-534-1	Azo Incinerator/Scrubber System Natural Gas Combustion
	EU-13-534-2	Azo Incinerator/Scrubber System Azo Residue
	EU-13-514-2	Process Off-Gas
EP 126	EU-13-514-1	Step III Reactors
	EU-13-514-2	Process Off-Gas
EP 127	EU-13-FUG	A-Unit Fugitives
EP 176	EU-13-903	Step I Process
	EU-13-B6	CMA Drumming Fume Collector Blower
	EU-13-116	Finisher Recycle Surge Tank
	EU-13-120	Crude Azo Surge Tank
	EU-13-121	Crude Azo Charge Tank "A"
	EU-13-821	Crude Azo Charge Tank "B"
EP 198	EU-13-854	NH ₄ Cl Truck Silo
EP 242	EU-13-TK31	Formalin Storage Tank
EP 246	EU-13-TK46	Butanol Storage Tank
EP 280	EU-13-940	Technical Storage Tank "A"
EP 281	EU-13-943	Technical Storage Tank "B"

A-Unit (cont.)

Emission Point Number	Associated Emission Unit Number(s)	Associated Emission Unit Description
EP 285	EU-13-946	Technical Storage Tank "C"
EP 358	EU-13-07	Dehydrator Hotwell
EP 364 EP 365	EU-13-393	Dehydrator "A"
	EU-13-394	Dehydrator "B"
	EU-13-425	Finished Goods Receiver
	EU-13-426	Finished Goods Receiver
EP 371	EU-13-101	Mixer/Settler #1
EP 372	EU-13-102	Mixer/Settler #2
EP 373	EU-13-103	Mixer/Settler #3
EP 374	EU-13-104	Mixer/Settler #4
EP 375	EU-13-105	Mixer/Settler #5
EP 376	EU-13-TK25	Mixer Settler #6
EP 377	EU-13-TK23	East 20% Ammonium Chloride Tank
EP 378	EU-13-TK22	West 20% Ammonium Chloride Tank
EP 379	EU-13-365	Resin Column Settling Tank
	EU-13-381	Resin Column Feed Tank
EP 381	EU-13-B5	CMA Drumming Exhaust Blower
EP 383	EU-13-477	Crystallizer Condensate Receiver
EP 384	EU-13-377	Water Collection Tank
EP 385	EU-13-480	Ammonium Chloride Centrifuge
EP 386	EU-13-494	Ammonium Chloride Redissolver

Emission Point ID Number: EP 3

Associated Equipment

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-13-TK40	Technical Herbicide Storage Tank	Herbicide	300,000 gallons

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

There are no applicable emission limits for this emission unit

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:

1. This 300,000 gallon tank is limited to 22,200,000 gallons of throughput of herbicides per twelve month period. These herbicides, such as alachlor, acetochlor, butachlor, glyphosate and propachlor shall have a maximum vapor pressure of less than 0.01 mm Hg at the maximum storage temperature of 75° C.

Reporting & Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. The Material Safety Data Sheet (MSDS) for each of the chemicals stored in the tank.
2. Description of the tank which includes the dimensions and capacity.
3. During the first twelve (12) months of operation, determine the cumulative throughput of chemical for each month.
4. After the first twelve (12) months of operation, determine the annual throughput of chemicals on a rolling 12-month basis for each month.

Authority for Requirement: Iowa DNR Construction Permit 98-A-912

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 59

Stack Diameter (inches): 8

Stack Exhaust Flow Rate (acfm): NA

Stack Temperature (°F): 167

Vertical, Unobstructed Discharge Required: Yes ☐ No ☒

Authority for Requirement: Iowa DNR Construction Permit 98-A-912

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 108**Associated Equipment**

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-13-004	MEA Storage Tank	2-methyl-6-ethylaniline	75,000 gallons

Applicable Requirements**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

The emissions from this emission point shall not exceed the levels specified below.

There are no applicable emission limits for this emission unit at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Reporting & Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. The amount of material put through this vessel over the previous month shall be recorded at the end of each month. The total amount of material put through this vessel over the previous twelve months shall also be recorded at the end of each month.
2. An estimate of the amount of VOC's emitted from this vessel over the previous month shall be recorded at the end of each month. The total amount of VOC's emitted from this vessel over the previous twelve months shall also be recorded at the end of each month.

Authority for Requirement: Iowa DNR Construction Permit 99-A-880

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 27.5

Stack Diameter (inches): 6

Stack Exhaust Flow Rate (scfm): 2.14

Stack Temperature (°F): 40

Downward Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 99-A-880

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 110

Associated Equipment

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-13-053	Methanol Storage Tank	Methanol	75,000 gallons

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

There are no applicable emission limits for this emission unit at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

40 CFR 63 Subpart MMM "Pesticide Active Ingredient Production":

Standards:

The owner or operator of a Group 1 storage vessel at an existing affected source, as defined in Sec. 63.1361, shall equip the affected storage vessel as required by 63.1362(c)(2).

The owner or operator is exempt from the specifications in paragraph 63.1362(c)(2) during periods of planned routine maintenance as allowed by 63.1362(c)(5).

Recording and Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

40 CFR 63.1367(b)(6)

The owner or operator of an affected source that complies with the standards for process vents, storage tanks, and wastewater systems shall maintain up-to-date, readily accessible records of the information specified in paragraphs 63.1367(b)(6)(i) through (viii) to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in § 63.1362.

- (i) The initial calculations of uncontrolled and controlled emissions of gaseous organic HAP and HCl per batch for each process.
- (ii) The wastewater concentrations and flow rates per POD and process.
- (iii) The number of batches per year for each batch process.
- (iv) The operating hours per year for continuous processes.
- (v) The number of batches and the number of operating hours for processes that contain both batch and continuous operations.

- (vi) The number of tank turnovers per year, if used in an emissions average or for determining applicability of a new PAI process unit.
- (vii) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in § 63.1365(b)(11).
- (viii) Periods of planned routine maintenance as described in § 63.1362(c)(5).

Authority for Requirement: Iowa DNR Construction Permit 01-A-1068
567 IAC 23.1(4)"bm"
40 CFR 63, Subpart MMM

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 23

Stack Diameter (inches): 8

Stack Exhaust Flow Rate (scfm): NA

Stack Temperature (°F): Ambient

Vertical, Unobstructed Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 01-A-1068

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 113, EP 114**Associated Equipment**

Emission Point	Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EP 113	EU-13-207	Azo Weigh Tank "A"	Herbicide	800 gallons
EP 114	EU-13-208	Azo Weigh Tank "B"	Herbicide	800 gallons

Applicable Requirements**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

The emissions from this emission point shall not exceed the levels specified below.

There are no applicable emission limits for these emission units at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

40 CFR 63 Subpart MMM "Pesticide Active Ingredient Production":

Standards:

40 CFR 63.1362(b)(2)

- (ii) Uncontrolled organic HAP emissions from a process vent shall be reduced by 98 percent by weight.
- (iii) Excluding process vents that are subject to the requirements in paragraph (b)(2)(ii) of this section, uncontrolled organic HAP emissions from the sum of all process vents within a process shall be reduced by 90 percent or greater by weight.

40 CFR 63.1362(b)(3)

- (ii) HCl and Cl₂ emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater or to outlet concentrations less than or equal to 20 ppmv.

Recording and Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

40 CFR 63.1367(b)(6)

The owner or operator of an affected source that complies with the standards for process vents, storage tanks, and wastewater systems shall maintain up-to-date, readily accessible records of the information specified in paragraphs 63.1367(b)(6)(i) through (viii) to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in § 63.1362.

- (i) The initial calculations of uncontrolled and controlled emissions of gaseous organic HAP and HCl per batch for each process.
- (ii) The wastewater concentrations and flow rates per POD and process.
- (iii) The number of batches per year for each batch process.
- (iv) The operating hours per year for continuous processes.
- (v) The number of batches and the number of operating hours for processes that contain both batch and continuous operations.
- (vi) The number of tank turnovers per year, if used in an emissions average or for determining applicability of a new PAI process unit.
- (vii) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in § 63.1365(b)(11).
- (viii) Periods of planned routine maintenance as described in § 63.1362(c)(5).

40 CFR 63.1367(b)(10)

All maintenance performed on the air pollution control equipment.

Authority for Requirement: 567 IAC 23.1(4)"bm"
40 CFR 63, Subpart MMM

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 115**Associated Equipment**

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-13-422	Washer Feed Tank	Herbicide	7,500 gallons

Applicable Requirements**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

The emissions from this emission point shall not exceed the levels specified below.

There are no applicable emission limits for this emission unit at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

40 CFR 63 Subpart MMM "Pesticide Active Ingredient Production":

Standards:

40 CFR 63.1362(b)(2)

- (ii) Uncontrolled organic HAP emissions from a process vent shall be reduced by 98 percent by weight.
- (iii) Excluding process vents that are subject to the requirements in paragraph (b)(2)(ii) of this section, uncontrolled organic HAP emissions from the sum of all process vents within a process shall be reduced by 90 percent or greater by weight.

40 CFR 63.1362(b)(3)

- (ii) HCl and Cl₂ emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater or to outlet concentrations less than or equal to 20 ppmv.

Recording and Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

40 CFR 63.1367(b)(6)

The owner or operator of an affected source that complies with the standards for process vents, storage tanks, and wastewater systems shall maintain up-to-date, readily accessible records of the information specified in paragraphs 63.1367(b)(6)(i) through (viii) to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in § 63.1362.

- (i) The initial calculations of uncontrolled and controlled emissions of gaseous organic HAP and HCl per batch for each process.
- (ii) The wastewater concentrations and flow rates per POD and process.
- (iii) The number of batches per year for each batch process.
- (iv) The operating hours per year for continuous processes.
- (v) The number of batches and the number of operating hours for processes that contain both batch and continuous operations.
- (vi) The number of tank turnovers per year, if used in an emissions average or for determining applicability of a new PAI process unit.
- (vii) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in § 63.1365(b)(11).
- (viii) Periods of planned routine maintenance as described in § 63.1362(c)(5).

Authority for Requirement: 567 IAC 23.1(4)"bm"

40 CFR 63, Subpart MMM

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 121**Associated Equipment**

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity
EU-13-203	Step II Reactor "A"	CE-13-757: Condenser CE-13-503: Caustic Scrubber	Herbicide	2,000 gallons
EU-13-204	Step II Reactor "B"	CE-13-758: Condenser CE-13-503: Caustic Scrubber	Herbicide	2,000 gallons
EU-13-TK20	5 th Bay Sump	CE-13-503: Caustic Scrubber	Herbicide	545 gallons
EU-13-TK29	CMA Surge Tank	CE-13-503: Caustic Scrubber	Herbicide	5,000 gallons

Applicable Requirements**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Volatile Organic Compounds (VOC's)

Emission Limit(s): 3.41 lb/hr, 14.9 ton/yr

Authority for Requirement: Iowa DNR Construction Permit 93-A-378

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

40 CFR 63 Subpart MMM "Pesticide Active Ingredient Production":

Standards:

40 CFR 63.1362(b)(2)

(ii) Uncontrolled organic HAP emissions from a process vent shall be reduced by 98 percent by weight.

(iii) Excluding process vents that are subject to the requirements in paragraph (b)(2)(ii) of this section, uncontrolled organic HAP emissions from the sum of all process vents within a process shall be reduced by 90 percent or greater by weight.

40 CFR 63.1362(b)(3)

(ii) HCl and Cl₂ emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater or to outlet concentrations less than or equal to 20 ppmv.

Monitoring:

40 CFR 63.1366

Affected sources using liquid scrubbers shall monitor scrubber performance as required by (b)(1)(ii).

If the owner/operator chooses to use a Continuous Emission Monitor as an alternative to the parameters in paragraph (b)(1)(ii), the monitor shall be operated as required in (b)(1)(x).

The owner/operator may request approval to monitor parameters other than those required by (b)(1)(ii) and (x) as stated in paragraph (b)(4).

40 CFR 63.1366(b)(2)

Averaging periods for parametric monitoring levels shall be established according to paragraphs 63.1366(b)(2)(i) through (iii).

40 CFR 63.1366(b)(3)

Parameter levels for control devices shall be set according to paragraphs 63.1366(b)(3)(i) through (iii).

Recording and Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

40 CFR 63.1367(b)(1)

Each measurement of a control device operating parameter monitored in accordance with § 63.1366.

40 CFR 63.1367(b)(6)

The owner or operator of an affected source that complies with the standards for process vents, storage tanks, and wastewater systems shall maintain up-to-date, readily accessible records of the information specified in paragraphs 63.1367(b)(6)(i) through (viii) to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in § 63.1362.

- (i) The initial calculations of uncontrolled and controlled emissions of gaseous organic HAP and HCl per batch for each process.
- (ii) The wastewater concentrations and flow rates per POD and process.
- (iii) The number of batches per year for each batch process.
- (iv) The operating hours per year for continuous processes.
- (v) The number of batches and the number of operating hours for processes that contain both batch and continuous operations.
- (vi) The number of tank turnovers per year, if used in an emissions average or for determining applicability of a new PAI process unit.
- (vii) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in § 63.1365(b)(11).
- (viii) Periods of planned routine maintenance as described in § 63.1362(c)(5).

40 CFR 63.1367(b)(10)

All maintenance performed on the air pollution control equipment.

Authority for Requirement: 567 IAC 23.1(4)"bm"
40 CFR 63, Subpart MMM

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 89

Stack Diameter (inches): 4

Stack Exhaust Flow Rate (scfm): 200

Stack Temperature (°F): 85

Vertical, Unobstructed Discharge Required: Yes ☐ No ☒

Authority for Requirement: Iowa DNR Construction Permit 93-A-378

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 122

Associated Equipment

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-13-520	Mixer/Settler Fume Vent	Mixer/Settler Fugitive Emissions	NA

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

There are no applicable emission limits for this emission unit at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

40 CFR 63 Subpart MMM "Pesticide Active Ingredient Production":

Standards:

40 CFR 63.1362(b)(2)

- (ii) Uncontrolled organic HAP emissions from a process vent shall be reduced by 98 percent by weight.
- (iii) Excluding process vents that are subject to the requirements in paragraph (b)(2)(ii) of this section, uncontrolled organic HAP emissions from the sum of all process vents within a process shall be reduced by 90 percent or greater by weight.

40 CFR 63.1362(b)(3)

- (ii) HCl and Cl₂ emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater or to outlet concentrations less than or equal to 20 ppmv.

40 CFR 63.1367(b)(6)

The owner or operator of an affected source that complies with the standards for process vents, storage tanks, and wastewater systems shall maintain up-to-date, readily accessible records of the information specified in paragraphs 63.1367(b)(6)(i) through (viii) to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in § 63.1362.

- (i) The initial calculations of uncontrolled and controlled emissions of gaseous organic HAP and HCl per batch for each process.
- (ii) The wastewater concentrations and flow rates per POD and process.
- (iii) The number of batches per year for each batch process.
- (iv) The operating hours per year for continuous processes.

- (v) The number of batches and the number of operating hours for processes that contain both batch and continuous operations.
- (vi) The number of tank turnovers per year, if used in an emissions average or for determining applicability of a new PAI process unit.
- (vii) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in § 63.1365(b)(11).
- (viii) Periods of planned routine maintenance as described in § 63.1362(c)(5).

Authority for Requirement: 567 IAC 23.1(4)"bm"
40 CFR 63, Subpart MMM

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 123

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity
EU-13-483	NH ₄ L Recovery Process Dryer	CE-13-484: Cyclone CE-13-499: Agglomeration Tower CE-13-289: Wet Scrubber	NH ₄ Cl	3,300 lb/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 40 %⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 76-A-104-S2
567 IAC 23.3(2)"d"

⁽¹⁾ Per DNR Air Quality Policy 3-b-08, Opacity Limits, an exceedance of the indicator opacity of (25%) will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. The permit holder shall also file an "indicator opacity exceedance report" with the DNR field office and keep records as required in the policy. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter

Emission Limit(s): 0.5 lb/hr⁽²⁾

Authority for Requirement: Iowa DNR Construction Permit 76-A-104-S2

⁽²⁾ Standard is expressed as the average of 3 runs.

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 64

Stack Diameter (inches): 17

Stack Exhaust Flow Rate (acfm): 2,500

Stack Temperature (°F): 158

Vertical, Obstructed Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 76-A-104-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Stack Testing:

Pollutant – Particulate Matter

Stack Test to be Completed by – within two (2) years from permit issuance

Test Method – Iowa Compliance Sampling Manual Method 5

Authority for Requirement - 567 IAC 22.108(3)

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☒ No ☐

(Required for CE-13-484, CE-13-499, and CE-13-289)

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

Facility operation and maintenance plans are to be developed by the facility within six(6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 125

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity
EU-12-534-1	Azo Incinerator/ Scrubber System Natural Gas Combustion	CE-13-534: Azo Incinerator CE-13-S-3: Azo Incinerator Scrubber CE-13-F-6: Azo Incinerator Mist Eliminator	Natural Gas	8.5 MMBtu/hr
EU-13-534-2	Azo Incinerator/ Scrubber System Azo Residue		Azo Residue	374,725 gal/yr
EU-13-514-2	Process Off-Gas		Herbicide	NA

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 40 %

Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter

Emission Limit(s): 6.0 lb/hr, 26.3 ton/yr

Authority for Requirement: Iowa DNR Construction Permit 76-A-317-S4

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

Authority for Requirement: 567 IAC 23.3(3)"e"

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:

1. The amount of residue that may be burned in this incinerator shall not exceed 374,725 gallons per year.

Reporting & Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. The feed rates of residue to the Azo Incinerator.

Authority for Requirement: Iowa DNR Construction Permit 76-A-317-S4

40 CFR 63 Subpart MMM "Pesticide Active Ingredient Production":

Standards:

40 CFR 63.1362(b)(2)

- (ii) Uncontrolled organic HAP emissions from a process vent shall be reduced by 98 percent by weight.
- (iii) Excluding process vents that are subject to the requirements in paragraph (b)(2)(ii) of this section, uncontrolled organic HAP emissions from the sum of all process vents within a process shall be reduced by 90 percent or greater by weight.

40 CFR 63.1362(b)(3)

- (ii) HCl and Cl₂ emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater or to outlet concentrations less than or equal to 20 ppmv.

Monitoring:

40 CFR 63.1366

Affected sources using liquid scrubbers shall monitor scrubber performance as required by (b)(1)(ii).

For each thermal incinerator, the owner or operator shall monitor the temperature of the gases exiting the combustion chamber as defined in paragraph (b)(1)(vii).

If the owner/operator chooses to use a Continuous Emission Monitor as an alternative to the parameters in paragraph (b)(1)(ii) or (b)(1)(vii), the monitor shall be operated as required in (b)(1)(x).

The owner/operator may request approval to monitor parameters other than those required by (b)(1)(ii), (b)(1)(vii), and (x) as stated in paragraph (b)(4). The Department has approved alternative monitoring parameters for the scrubber CE-13-S-3. These parameters are included in the Precompliance Plan submitted to the Department on September 23, 2003 (see Appendix F)

40 CFR 63.1366(b)(2)

Averaging periods for parametric monitoring levels shall be established according to paragraphs 63.1366(b)(2)(i) through (iii).

40 CFR 63.1366(b)(3)

Parameter levels for control devices shall be set according to paragraphs 63.1366(b)(3)(i) through (iii).

Recording and Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

40 CFR 63.1367(b)(1)

Each measurement of a control device operating parameter monitored in accordance with § 63.1366.

40 CFR 63.1367(b)(6)

The owner or operator of an affected source that complies with the standards for process vents, storage tanks, and wastewater systems shall maintain up-to-date, readily accessible records of the information specified in paragraphs 63.1367(b)(6)(i) through (viii) to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in § 63.1362.

- (i) The initial calculations of uncontrolled and controlled emissions of gaseous organic HAP and HCl per batch for each process.
- (ii) The wastewater concentrations and flow rates per POD and process.
- (iii) The number of batches per year for each batch process.
- (iv) The operating hours per year for continuous processes.
- (v) The number of batches and the number of operating hours for processes that contain both batch and continuous operations.
- (vi) The number of tank turnovers per year, if used in an emissions average or for determining applicability of a new PAI process unit.
- (vii) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in § 63.1365(b)(11).
- (viii) Periods of planned routine maintenance as described in § 63.1362(c)(5).

40 CFR 63.1367(b)(10)

All maintenance performed on the air pollution control equipment.

Authority for Requirement: 567 IAC 23.1(4)"bm"
40 CFR 63, Subpart MMM

40 CFR Part 60 Subpart DDDD "Emission Guidelines for Commercial and Industrial Solid Waste Incinerators"

The "AZO Incinerator" must demonstrate final compliance with all applicable requirements of 40 CFR Part 62 Subpart III "Federal Plan for Commercial and Industrial Solid Waste Incineration Units that Commenced Construction On or Before November 30, 1999" by October 3, 2005 (extension granted by EPA Region 7 in letter dated February 17, 2004).

(b) If Monsanto plans to continue operation and come into compliance with the requirements of this subpart after October 4, 2004, but before October 3, 2005 Monsanto must petition for and be granted an extension of the final compliance date specified Sec. 62.14535(a)(3) by meeting the requirements of Sec. 62.14536 and Monsanto must meet the requirements for increments of progress specified in Sec. 62.14540 through Sec. 62.14565. To achieve the final compliance increment of progress, Monsanto must complete the requirements of paragraphs (b)(1) through (b)(5) of this section.

- (1) Monsanto must comply with the operator training and qualification requirements and inspection requirements (if applicable) of this subpart by October 4, 2004.
- (2) Monsanto must submit a waste management plan no later than April 5, 2004 (submitted April 2, 2004).
- (3) Monsanto must achieve final compliance by October 3, 2005. For the final compliance increment of progress, Monsanto must incorporate all process changes and complete retrofit construction of control devices, as specified in the final control plan, so that, when the affected CISWI unit is brought online, all necessary process changes and air pollution control devices operate as designed.

(4) Monsanto must conduct the initial performance test within 90 days after the date when Monsanto are required to achieve final compliance under paragraph (b)(3) of this section.

(5) Monsanto must submit an initial report including the result of the initial performance no later than 60 days following the initial performance test (see Sec. 62.14700 through 62.14760 for complete reporting and recordkeeping requirements).

Authority for Requirement: 567 IAC 23.1(5)"c"
40 CFR Part 60 Subpart DDDD
40 CFR Part 62 Subpart III

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 60

Stack Diameter (inches): 21

Stack Exhaust Flow Rate (scfm): 6,000

Stack Temperature (°F): 195

Vertical, Unobstructed Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 76-A-317-S4

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 126**Associated Equipment**

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity
EU-13-514-1	Step III Reactors	CE-13-514: Water Scrubber	Herbicide	NA
EU-13-514-2	Process Off-Gas		Herbicide	NA

Applicable Requirements**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Volatile Organic Compounds (VOC's)

Emission Limit(s): 8.15 lb/hr, 35.7 ton/yr from A-Unit vents

Emission Limit(s): 17.35 lb/hr, 7.2 ton/yr from Process Off-Gas

Authority for Requirement: Iowa DNR Construction Permit 76-A-103-S4

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:

1. Process Off-Gas delivered to this scrubber shall not exceed 825 hours per year.

Authority for Requirement: Iowa DNR Construction Permit 76-A-103-S4

Recording and Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. Record the number of hours that Process Off-Gas is delivered to this scrubber.

Authority for Requirement: 567 IAC 22.108(4)

40 CFR 63 Subpart MMM "Pesticide Active Ingredient Production":

Standards:

40 CFR 63.1362(b)(2)

(ii) Uncontrolled organic HAP emissions from a process vent shall be reduced by 98 percent by weight.

(iii) Excluding process vents that are subject to the requirements in paragraph (b)(2)(ii) of this section, uncontrolled organic HAP emissions from the sum of all process vents within a process shall be reduced by 90 percent or greater by weight.

40 CFR 63.1362(b)(3)

(ii) HCl and Cl₂ emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater or to outlet concentrations less than or equal to 20 ppmv.

Monitoring:

40 CFR 63.1366

Affected sources using liquid scrubbers shall monitor scrubber performance as required by (b)(1)(ii).

If the owner/operator chooses to use a Continuous Emission Monitor as an alternative to the parameters in paragraph (b)(1)(ii), the monitor shall be operated as required in (b)(1)(x).

The owner/operator may request approval to monitor parameters other than those required by (b)(1)(ii), (b)(1)(vii), and (x) as stated in paragraph (b)(4). The Department has approved alternative monitoring parameters for the scrubber CE-13-514. These parameters are included in the Precompliance Plan submitted to the Department on September 23, 2003 (see Appendix F)

40 CFR 63.1366(b)(2)

Averaging periods for parametric monitoring levels shall be established according to paragraphs 63.1366(b)(2)(i) through (iii).

40 CFR 63.1366(b)(3)

Parameter levels for control devices shall be set according to paragraphs 63.1366(b)(3)(i) through (iii).

Recording and Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

40 CFR 63.1367(b)(1)

Each measurement of a control device operating parameter monitored in accordance with § 63.1366.

40 CFR 63.1367(b)(6)

The owner or operator of an affected source that complies with the standards for process vents, storage tanks, and wastewater systems shall maintain up-to-date, readily accessible records of the information specified in paragraphs 63.1367(b)(6)(i) through (viii) to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in § 63.1362.

(i) The initial calculations of uncontrolled and controlled emissions of gaseous organic HAP and HCl per batch for each process.

(ii) The wastewater concentrations and flow rates per POD and process.

(iii) The number of batches per year for each batch process.

(iv) The operating hours per year for continuous processes.

(v) The number of batches and the number of operating hours for processes that contain both batch and continuous operations.

- (vi) The number of tank turnovers per year, if used in an emissions average or for determining applicability of a new PAI process unit.
- (vii) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in § 63.1365(b)(11).
- (viii) Periods of planned routine maintenance as described in § 63.1362(c)(5).

40 CFR 63.1367(b)(10)

All maintenance performed on the air pollution control equipment.

Authority for Requirement: 567 IAC 23.1(4)"bm"
40 CFR 63, Subpart MMM

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 89

Stack Diameter (inches): 12

Stack Exhaust Flow Rate (scfm): 500

Stack Temperature (°F): 85

Vertical, Unobstructed Discharge Required: Yes ☐ No ☒

Authority for Requirement: Iowa DNR Construction Permit 76-A-103-S4

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 127**Associated Equipment**

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-12-FUG	A-Unit Fugitives	Herbicide	NA

Applicable Requirements**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

The emissions from this emission point shall not exceed the levels specified below.

There are no applicable emission limits for this emission unit at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

40 CFR 63 Subpart MMM "Pesticide Active Ingredient Production":

Each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, and instrumentation system in organic hazardous air pollutant service (contains or contacts a fluid or gas that is at least 5% by weight of total organic HAP's) shall comply with the Standards for Equipment Leaks as required in 63.1363.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 176

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity
EU-13-903	Step I Process	CE-13-903: Venturi Gas Scrubber CE-13-1019: Packed Vent Line	Herbicide	NA
EU-13-B6	CMA Drumming Fume Collector Blower		Herbicide	200 cfm
EU-13-116	Finisher Recycle Surge Tank		Herbicide	4,200 gallons
EU-13-120	Crude Azo Surge Tank		Herbicide	4,200 gallons
EU-13-121	Crude Azo Charge Tank "A"		Herbicide	3,730 gallons
EU-13-821	Crude Azo Charge Tank "B"		Herbicide	3,730 gallons

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Volatile Organic Compounds (VOC's)

Emission Limit(s): 6.86 lb/hr, 30 ton/yr

Authority for Requirement: Iowa DNR Construction Permit 82-A-042-S6

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

40 CFR 63 Subpart MMM "Pesticide Active Ingredient Production":

Standards:

40 CFR 63.1362(b)(2)

(ii) Uncontrolled organic HAP emissions from a process vent shall be reduced by 98 percent by weight.

(iii) Excluding process vents that are subject to the requirements in paragraph (b)(2)(ii) of this section, uncontrolled organic HAP emissions from the sum of all process vents within a process shall be reduced by 90 percent or greater by weight.

40 CFR 63.1362(b)(3)

(ii) HCl and Cl₂ emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater or to outlet concentrations less than or equal to 20 ppmv.

Monitoring:

40 CFR 63.1366

Affected sources using liquid scrubbers shall monitor scrubber performance as required by (b)(1)(ii).

If the owner/operator chooses to use a Continuous Emission Monitor as an alternative to the parameters in paragraph (b)(1)(ii), the monitor shall be operated as required in (b)(1)(x).

The owner/operator may request approval to monitor parameters other than those required by (b)(1)(ii), (b)(1)(vii), and (x) as stated in paragraph (b)(4). The Department has approved alternative monitoring parameters for the scrubber CE-13-514. These parameters are included in the Precompliance Plan submitted to the Department on September 23, 2003 (see Appendix F)

40 CFR 63.1366(b)(2)

Averaging periods for parametric monitoring levels shall be established according to paragraphs 63.1366(b)(2)(i) through (iii).

40 CFR 63.1366(b)(3)

Parameter levels for control devices shall be set according to paragraphs 63.1366(b)(3)(i) through (iii).

Recording and Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

40 CFR 63.1367(b)(1)

Each measurement of a control device operating parameter monitored in accordance with § 63.1366.

40 CFR 63.1367(b)(6)

The owner or operator of an affected source that complies with the standards for process vents, storage tanks, and wastewater systems shall maintain up-to-date, readily accessible records of the information specified in paragraphs 63.1367(b)(6)(i) through (viii) to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in § 63.1362.

- (i) The initial calculations of uncontrolled and controlled emissions of gaseous organic HAP and HCl per batch for each process.
- (ii) The wastewater concentrations and flow rates per POD and process.
- (iii) The number of batches per year for each batch process.
- (iv) The operating hours per year for continuous processes.
- (v) The number of batches and the number of operating hours for processes that contain both batch and continuous operations.
- (vi) The number of tank turnovers per year, if used in an emissions average or for determining applicability of a new PAI process unit.
- (vii) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in § 63.1365(b)(11).

(viii) Periods of planned routine maintenance as described in § 63.1362(c)(5).

40 CFR 63.1367(b)(10)

All maintenance performed on the air pollution control equipment.

Authority for Requirement: Iowa DNR Construction Permit 82-A-042-S6

567 IAC 23.1(4)"bm"

40 CFR 63, Subpart MMM

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 89

Stack Diameter (inches): 10

Stack Exhaust Flow Rate (scfm): 200

Stack Temperature (°F): Ambient

Downward Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 82-A-042-S6

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 198

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Silo Capacity
EU-13-854	NH ₄ Cl Truck Silo	CE-13-852:Dust Collector	NH ₄ Cl	75,030 lbs

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 40 %⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 83-A-028-S2
567 IAC 23.3(2)"d"

⁽¹⁾ Per DNR Air Quality Policy 3-b-08, Opacity Limits, an exceedance of the indicator opacity of (25%) will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. The permit holder shall also file an "indicator opacity exceedance report" with the DNR field office and keep records as required in the policy. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter

Emission Limit(s): 1.54 lb/hr⁽²⁾, 0.1 gr/scf

Authority for Requirement: Iowa DNR Construction Permit 83-A-028-S2
567 IAC 23.3(2)"a"

⁽²⁾ Standard is expressed as the average of 3 runs.

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 50

Stack Diameter (inches): 10

Stack Exhaust Flow Rate (acfm): 1,800

Stack Temperature (°F): Ambient

Vertical, Unobstructed Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 83-A-028-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☒ No ☐

Facility:	Monsanto Company – Muscatine
EIQ Number:	92-6909
Emission Unit:	EU-13-854: NH ₄ Cl Truck Silo
Emission Point:	EP 198: Collector Vent Pipe
Control Equipment:	CE-13-852: Dust Collector

Monitoring Guidelines

The Monsanto Company – Muscatine Facility makes a commitment to take timely corrective action during periods of excursion where the indicators are out of range. A corrective action may include an investigation of the reason for the excursion, evaluation of the situation and necessary follow-up action to return operation within the indicator range. An excursion is determined by the averaged discrete data point over a period of time. An excursion does not necessarily indicate a violation of an applicable requirement.

If the corrective action measures fail to return the indicators to the appropriate range, the facility will report the exceedance to the department and conduct source testing within 90 days of the exceedance to demonstrate compliance with applicable requirements. If the test demonstrates compliance with emission limits then new indicator ranges must be set for monitoring and the new ranges must be incorporated in the operating permit. If the test demonstrates noncompliance with emission limits, then the facility, within 60 days, proposes a schedule to implement corrective action to bring the source into compliance and demonstrate compliance.

Monitoring Methods and Corrective Actions

General

- Periodic monitoring is not required during periods of time greater than one day in which the dust collector does not operate.

Daily Monitoring

- Visible emissions shall be observed at least once per shift to ensure that no visible emissions are occurring while the unit is in operation. If visible emissions are observed, this would be an exceedance, and corrective action will be initiated as soon as possible, but no later than 8 hours from the observation of visible emissions.
 - If corrective actions do not return the observation to no visible emissions, A Method 9 observation will be required. If the Method 9 reading results in an opacity reading greater than 40%, this would be a violation and further corrective action will be initiated as soon as possible, but no later than 8 hours after the Method 9 observation.
 - If weather conditions prevent the observer from conducting a Method 9 observation, the observer shall note these conditions on the data observation sheet. If a Method 9 reading is required to satisfy the required monitoring period, at least three attempts will be made to retake the observation, at approximately two-hour intervals throughout the day. If all readings that day are unsuccessful due to weather, an observation shall be made the next operating day, when weather permits.
- Check the baghouse pressure drop. This information is displayed on a Provox Distributed Control System on the control room consoles. The data is logged on a Process Data Historian for reference. Normal differential pressure ranges from 1" to 2" of H₂O, and the low and high-level alarm set points are established for this system.

Monthly Monitoring

- Once per month the dust collector bag cleaning sequence will be checked. This includes checking the cleaning sequence valve operation and the air delivery system for proper operation. If abnormal operation is detected, measures for remediation will be implemented within 8 hours.
- Once per month the baghouse hopper functions and performance will be checked. If abnormal operation is detected, measures for remediation will be implemented within 8 hours.

Semiannual Monitoring

- Every 6 months, all external components, including structural components and ductwork, will be inspected. If leaks or abnormal conditions are detected, measures for remediation will be implemented within 8 hours if the equipment is in operation

Annual Monitoring

- The bags and internal structure will be inspected once per year. If leaks or abnormal conditions are detected, measures for remediation will be implemented before returning the dust collector to service. Bag replacement will be documented with the date, time, and location of the bag(s) replaced. The location will be identified through a bag layout diagram.

Record Keeping and Reporting

- A written or electronic record will be created for required inspections, along with any action resulting from the inspection.
- Maintenance and inspection records will be kept for five years and will be available for review upon request by an authorized regulatory agency.

Quality Control

- The equipment and associated instruments will be operated and maintained according to the manufacturer's recommendations.
- An adequate spare parts inventory is maintained through a computerized inventory management system.

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 242

Associated Equipment

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-13-TK31	Formalin Storage Tank	Formalin	50,000 gallons

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

There are no applicable emission limits for this emission unit at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Reporting & Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. The amount of material put through this vessel over the previous month shall be recorded at the end of each month. The total amount of material put through this vessel over the previous twelve months shall also be recorded at the end of each month.
2. An estimate of the amount of VOC's emitted from this vessel over the previous month shall be recorded at the end of each month. The total amount of VOC's emitted from this vessel over the previous twelve month shall also be recorded at the end of each month.

Authority for Requirement: Iowa DNR Construction Permit 99-A-879

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 62

Stack Diameter (inches): 6

Stack Exhaust Flow Rate (scfm): 0.83

Stack Temperature (°F): 65

Downward Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 99-A-879

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 246**Associated Equipment**

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-13-TK46	Butanol Storage Tank	Butanol	30,000 gallons

Applicable Requirements**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

The emissions from this emission point shall not exceed the levels specified below.

There are no applicable emission limits for this emission unit at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Reporting & Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. The amount of material put through this vessel over the previous month shall be recorded at the end of each month. The total amount of material put through this vessel over the previous twelve months shall also be recorded at the end of each month.
2. An estimate of the amount of VOC's emitted from this vessel over the previous month shall be recorded at the end of each month. The total amount of VOC's emitted from this vessel over the previous twelve month shall also be recorded at the end of each month.

Authority for Requirement: Iowa DNR Construction Permit 99-A-881

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 40

Stack Diameter (inches): 4

Stack Exhaust Flow Rate (scfm): 0.51

Stack Temperature (°F): 68

Downward Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 99-A-881

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 280 and EP 281

Associated Equipment

Emission Point	Emission Unit	Emission Unit Description	Raw Material	Rated Capacity	Construction Permit
EP 280	EU-13-940	Technical Storage Tank "A"	Herbicide	250,000 gallons	95-A-089-S2
EP 281	EU-13-943	Technical Storage Tank "B"	Herbicide	250,000 gallons	95-A-090-S2

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

There are no applicable emission limits for these units at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:

1. Technical Storage Tanks "A" and "B" shall not be used to store any material that is more volatile than Alachlor Technical (0.02 mm Hg at 100°C).

Reporting & Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. The owner or operator shall maintain a Material Safety Data Sheet (MSDS) of any material stored in Technical Storage Tanks "A" and "B".

Authority for Requirement: Iowa DNR Construction Permits 95-A-089-S2 and 95-A-090-S2

Emission Point Characteristics

Each emission point shall conform to the specifications listed below.

Stack Height (feet): 51

Stack Diameter (inches): 8

Stack Exhaust Flow Rate (acfm): Displacement

Stack Temperature (°F): 150

Downward Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permits 95-A-089S2 and 95-A-090-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 285**Associated Equipment**

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-13-946	Technical Storage Tank "C"	Herbicide	250,000 gallons

Applicable Requirements**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

The emissions from this emission point shall not exceed the levels specified below.

There are no applicable emission limits for this emission unit at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:

1. The storage vessel shall not store a liquid with a maximum true vapor pressure greater than 0.010 mmHg.
2. The storage tank shall be insulated.

Reporting & Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. The VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

Authority for Requirement: Iowa DNR Construction Permit 95-A-506

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 358**Associated Equipment**

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-13-407	Dehydrator Hotwell	Herbicide	490 gallons

Applicable Requirements**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

The emissions from this emission point shall not exceed the levels specified below.

There are no applicable emission limits for this emission point at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

40 CFR 63 Subpart MMM "Pesticide Active Ingredient Production":

Standards:

40 CFR 63.1362(b)(2)

- (ii) Uncontrolled organic HAP emissions from a process vent shall be reduced by 98 percent by weight.
- (iii) Excluding process vents that are subject to the requirements in paragraph (b)(2)(ii) of this section, uncontrolled organic HAP emissions from the sum of all process vents within a process shall be reduced by 90 percent or greater by weight.

40 CFR 63.1362(b)(3)

- (ii) HCl and Cl₂ emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater or to outlet concentrations less than or equal to 20 ppmv.

Recording and Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

40 CFR 63.1367(b)(6)

The owner or operator of an affected source that complies with the standards for process vents, storage tanks, and wastewater systems shall maintain up-to-date, readily accessible records of the information specified in paragraphs 63.1367(b)(6)(i) through (viii) to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in § 63.1362.

- (i) The initial calculations of uncontrolled and controlled emissions of gaseous organic HAP and HCl per batch for each process.
- (ii) The wastewater concentrations and flow rates per POD and process.
- (iii) The number of batches per year for each batch process.
- (iv) The operating hours per year for continuous processes.
- (v) The number of batches and the number of operating hours for processes that contain both batch and continuous operations.
- (vi) The number of tank turnovers per year, if used in an emissions average or for determining applicability of a new PAI process unit.
- (vii) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in § 63.1365(b)(11).
- (viii) Periods of planned routine maintenance as described in § 63.1362(c)(5).

Authority for Requirement: 567 IAC 23.1(4)"bm"
40 CFR 63, Subpart MMM

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 0.2

Stack Diameter (inches): 2

Stack Exhaust Flow Rate (scfm): Draft

Stack Temperature (°F): 150

Discharge Type: Vertical w/ Obstructing Raincap or Horizontal

Authority for Requirement: Iowa DNR Construction Permit 00-A-758

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Numbers: EP 364, EP 365

Associated Equipment

Emission Point	Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
EP 364	EU-13-393	Dehydrator "A"	CE-13-1007: Condenser	Herbicide	197 gallons	01-A-1066
	EU-13-394	Dehydrator "B"		Herbicide	197 gallons	
EP 365	EU-13-425	Finished Goods Receiver	CE-13-1011: Condenser	Herbicide	2,778 gallons	01-A-1067
	EU-13-426	Finished Goods Receiver		Herbicide	2,778 gallons	

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

There are no applicable emission limits for these emission units at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

NESHAP:

1. The owner or operator shall comply with all applicable requirements of Subpart MMM, 40 CFR 63.1362, by the existing source compliance date as required in 40 CFR 63.1364(a).
2. The owner or operator shall develop and implement a written startup, shutdown and malfunction plan, as specified in 40 CFR 63.6(e)(3) of Subpart A, including all the requirements of 40 CFR 63.1367(a)(3).
3. A precompliance plan shall be submitted at least 6 months prior to the existing source compliance date of Subpart MMM, as required in 40 CFR 63.1368(e).

Reporting & Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. By the existing source compliance date of Subpart MMM, the owner or operator shall monitor the condenser exit (product side) temperature a minimum of once every 15 minutes during the period in which it is controlling HAP emissions, as required in 40 CFR 63.1366(b)(iii).

Authority for Requirement: Iowa DNR Construction Permits 01-A-1066 and 01-A-1067
567 IAC 23.1(4)"bm"
40 CFR 63, Subpart MMM

40 CFR 63 Subpart MMM "Pesticide Active Ingredient Production":

Standards:

40 CFR 63.1362(b)(2)

- (ii) Uncontrolled organic HAP emissions from a process vent shall be reduced by 98 percent by weight.
- (iii) Excluding process vents that are subject to the requirements in paragraph (b)(2)(ii) of this section, uncontrolled organic HAP emissions from the sum of all process vents within a process shall be reduced by 90 percent or greater by weight.

40 CFR 63.1362(b)(3)

- (ii) HCl and Cl₂ emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater or to outlet concentrations less than or equal to 20 ppmv.

Monitoring:

40 CFR 63.1366(b)(1)(i)

Periodic verification. For control devices that control vent streams containing total HAP emissions less than 0.91 Mg/yr, before control, monitoring shall consist of a periodic verification that the device is operating properly. This verification shall include, but not be limited to, a daily or more frequent demonstration that the unit is working as designed and may include the daily measurements of the parameters described in paragraphs (b)(1)(ii) through (xii) of this section. This demonstration shall be included in the Precompliance plan (see Appendix F).

Recording and Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

40 CFR 63.1367(b)(1)

Each measurement of a control device operating parameter monitored in accordance with § 63.1366.

40 CFR 63.1367(b)(6)

The owner or operator of an affected source that complies with the standards for process vents, storage tanks, and wastewater systems shall maintain up-to-date, readily accessible records of the information specified in paragraphs 63.1367(b)(6)(i) through (viii) to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in § 63.1362.

- (i) The initial calculations of uncontrolled and controlled emissions of gaseous organic HAP and HCl per batch for each process.
- (ii) The wastewater concentrations and flow rates per POD and process.
- (iii) The number of batches per year for each batch process.
- (iv) The operating hours per year for continuous processes.
- (v) The number of batches and the number of operating hours for processes that contain both batch and continuous operations.
- (vi) The number of tank turnovers per year, if used in an emissions average or for determining applicability of a new PAI process unit.

- (vii) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in § 63.1365(b)(11).
- (viii) Periods of planned routine maintenance as described in § 63.1362(c)(5).

40 CFR 63.1367(b)(10)

All maintenance performed on the air pollution control equipment.

Authority for Requirement: 567 IAC 23.1(4)"bm"
40 CFR 63, Subpart MMM

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 66

Stack Diameter (inches): 1.5

Stack Exhaust Flow Rate (acfm): 7

Stack Temperature (°F): 130

Downward Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permits 01-A-1066 and 1067

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

**Emission Point ID Numbers: EP 371, EP 372, EP 373, EP 374, EP 375,
EP 376**

Associated Equipment

Emission Point	Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EP 371	EU-13-101	Mixer/Settler #1	Herbicide	2,000 gallons
EP 372	EU-13-102	Mixer/Settler #2	Herbicide	2,000 gallons
EP 373	EU-13-103	Mixer/Settler #3	Herbicide	2,000 gallons
EP 374	EU-13-104	Mixer/Settler #4	Herbicide	2,000 gallons
EP 375	EU-13-105	Mixer/Settler #5	Herbicide	2,000 gallons
EP 376	EU-13-TK25	Mixer/Settler #6	Herbicide	3,290 gallons

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

There are no applicable emission limits for these emission units at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

40 CFR 63 Subpart MMM "Pesticide Active Ingredient Production":

Standards:

40 CFR 63.1362(b)(2)

- (ii) Uncontrolled organic HAP emissions from a process vent shall be reduced by 98 percent by weight.
- (iii) Excluding process vents that are subject to the requirements in paragraph (b)(2)(ii) of this section, uncontrolled organic HAP emissions from the sum of all process vents within a process shall be reduced by 90 percent or greater by weight.

40 CFR 63.1362(b)(3)

- (ii) HCl and Cl₂ emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater or to outlet concentrations less than or equal to 20 ppmv.

Recording and Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

40 CFR 63.1367(b)(6)

The owner or operator of an affected source that complies with the standards for process vents, storage tanks, and wastewater systems shall maintain up-to-date, readily accessible records of the information specified in paragraphs 63.1367(b)(6)(i) through (viii) to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in § 63.1362.

- (i) The initial calculations of uncontrolled and controlled emissions of gaseous organic HAP and HCl per batch for each process.
- (ii) The wastewater concentrations and flow rates per POD and process.
- (iii) The number of batches per year for each batch process.
- (iv) The operating hours per year for continuous processes.
- (v) The number of batches and the number of operating hours for processes that contain both batch and continuous operations.
- (vi) The number of tank turnovers per year, if used in an emissions average or for determining applicability of a new PAI process unit.
- (vii) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in § 63.1365(b)(11).
- (viii) Periods of planned routine maintenance as described in § 63.1362(c)(5).

Authority for Requirement: 567 IAC 23.1(4)"bm"
40 CFR 63, Subpart MMM

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Numbers: EP 377, EP 378

Associated Equipment

Emission Point	Emission Unit	Emission Unit Description	Raw Material	Rated Capacity	Construction Permit
EP 377	EU-13-TK23	East 20% Ammonium Chloride Tank	Herbicide	25,000 gallons	02-A-753
EP 378	EU-13-TK22	West 20% Ammonium Chloride Tank	Herbicide	25,000 gallons	02-A-754

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

There are no applicable emission limits for these emission units at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

40 CFR 63 Subpart MMM "Pesticide Active Ingredient Production":

Standards:

40 CFR 63.1362(b)(2)

- (ii) Uncontrolled organic HAP emissions from a process vent shall be reduced by 98 percent by weight.
- (iii) Excluding process vents that are subject to the requirements in paragraph (b)(2)(ii) of this section, uncontrolled organic HAP emissions from the sum of all process vents within a process shall be reduced by 90 percent or greater by weight.

40 CFR 63.1362(b)(3)

- (ii) HCl and Cl₂ emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater or to outlet concentrations less than or equal to 20 ppmv.

Recording and Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

40 CFR 63.1367(b)(6)

The owner or operator of an affected source that complies with the standards for process vents, storage tanks, and wastewater systems shall maintain up-to-date, readily accessible records of the information specified in paragraphs 63.1367(b)(6)(i) through (viii) to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in § 63.1362.

- (i) The initial calculations of uncontrolled and controlled emissions of gaseous organic HAP and HCl per batch for each process.
- (ii) The wastewater concentrations and flow rates per POD and process.
- (iii) The number of batches per year for each batch process.
- (iv) The operating hours per year for continuous processes.
- (v) The number of batches and the number of operating hours for processes that contain both batch and continuous operations.
- (vi) The number of tank turnovers per year, if used in an emissions average or for determining applicability of a new PAI process unit.
- (vii) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in § 63.1365(b)(11).
- (viii) Periods of planned routine maintenance as described in § 63.1362(c)(5).

Authority for Requirement: Iowa DNR Construction Permits 02-A-753 and 02-A-754
567 IAC 23.1(4)"bm"
40 CFR 63, Subpart MMM

Emission Point Characteristics

Each emission point shall conform to the specifications listed below.

Stack Height (feet): 42

Stack Diameter (inches): 4

Stack Exhaust Flow Rate (scfm): Natural Draft

Stack Temperature (°F): 150

Downward Discharge Required: Iowa DNR Construction Permits 02-A-753 and 02-A-754

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 379**Associated Equipment**

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-13-365	Resin Column Settling Tank	Herbicide	3,130 gallons
EU-13-381	Resin Column Feed Tank	Herbicide	2,964 gallons

Applicable Requirements**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

The emissions from this emission point shall not exceed the levels specified below.

There are no applicable emission limits for these emission units at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

40 CFR 63 Subpart MMM "Pesticide Active Ingredient Production":

Standards:

40 CFR 63.1362(b)(2)

- (ii) Uncontrolled organic HAP emissions from a process vent shall be reduced by 98 percent by weight.
- (iii) Excluding process vents that are subject to the requirements in paragraph (b)(2)(ii) of this section, uncontrolled organic HAP emissions from the sum of all process vents within a process shall be reduced by 90 percent or greater by weight.

40 CFR 63.1362(b)(3)

- (ii) HCl and Cl₂ emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater or to outlet concentrations less than or equal to 20 ppmv.

Recording and Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

40 CFR 63.1367(b)(6)

The owner or operator of an affected source that complies with the standards for process vents, storage tanks, and wastewater systems shall maintain up-to-date, readily accessible records of the information specified in paragraphs 63.1367(b)(6)(i) through (viii) to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in § 63.1362.

- (i) The initial calculations of uncontrolled and controlled emissions of gaseous organic HAP and HCl per batch for each process.
- (ii) The wastewater concentrations and flow rates per POD and process.
- (iii) The number of batches per year for each batch process.
- (iv) The operating hours per year for continuous processes.
- (v) The number of batches and the number of operating hours for processes that contain both batch and continuous operations.
- (vi) The number of tank turnovers per year, if used in an emissions average or for determining applicability of a new PAI process unit.
- (vii) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in § 63.1365(b)(11).
- (viii) Periods of planned routine maintenance as described in § 63.1362(c)(5).

Authority for Requirement: 567 IAC 23.1(4)"bm"

40 CFR 63, Subpart MMM

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 381**Associated Equipment**

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-13-B5	CMA Drumming Exhaust Blower	Herbicide	3,000 cfm

Applicable Requirements**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

The emissions from this emission point shall not exceed the levels specified below.

There are no applicable emission limits for this emission unit at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

40 CFR 63 Subpart MMM "Pesticide Active Ingredient Production":

Standards:

40 CFR 63.1362(b)(2)

- (ii) Uncontrolled organic HAP emissions from a process vent shall be reduced by 98 percent by weight.
- (iii) Excluding process vents that are subject to the requirements in paragraph (b)(2)(ii) of this section, uncontrolled organic HAP emissions from the sum of all process vents within a process shall be reduced by 90 percent or greater by weight.

40 CFR 63.1362(b)(3)

- (ii) HCl and Cl₂ emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater or to outlet concentrations less than or equal to 20 ppmv.

Recording and Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

40 CFR 63.1367(b)(6)

The owner or operator of an affected source that complies with the standards for process vents, storage tanks, and wastewater systems shall maintain up-to-date, readily accessible records of the information specified in paragraphs 63.1367(b)(6)(i) through (viii) to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in § 63.1362.

- (i) The initial calculations of uncontrolled and controlled emissions of gaseous organic HAP and HCl per batch for each process.
- (ii) The wastewater concentrations and flow rates per POD and process.
- (iii) The number of batches per year for each batch process.
- (iv) The operating hours per year for continuous processes.
- (v) The number of batches and the number of operating hours for processes that contain both batch and continuous operations.
- (vi) The number of tank turnovers per year, if used in an emissions average or for determining applicability of a new PAI process unit.
- (vii) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in § 63.1365(b)(11).
- (viii) Periods of planned routine maintenance as described in § 63.1362(c)(5).

Authority for Requirement: 567 IAC 23.1(4)"bm"
40 CFR 63, Subpart MMM

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 383**Associated Equipment**

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-13-477	Crystallizer Condensate Receiver	Herbicide	10,600 gallons

Applicable Requirements**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

The emissions from this emission point shall not exceed the levels specified below.

There are no applicable emission limits for this emission unit at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

40 CFR 63 Subpart MMM "Pesticide Active Ingredient Production":

Standards:

40 CFR 63.1362(b)(2)

- (ii) Uncontrolled organic HAP emissions from a process vent shall be reduced by 98 percent by weight.
- (iii) Excluding process vents that are subject to the requirements in paragraph (b)(2)(ii) of this section, uncontrolled organic HAP emissions from the sum of all process vents within a process shall be reduced by 90 percent or greater by weight.

40 CFR 63.1362(b)(3)

- (ii) HCl and Cl₂ emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater or to outlet concentrations less than or equal to 20 ppmv.

Recording and Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

40 CFR 63.1367(b)(6)

The owner or operator of an affected source that complies with the standards for process vents, storage tanks, and wastewater systems shall maintain up-to-date, readily accessible records of the information specified in paragraphs 63.1367(b)(6)(i) through (viii) to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in § 63.1362.

- (i) The initial calculations of uncontrolled and controlled emissions of gaseous organic HAP and HCl per batch for each process.
- (ii) The wastewater concentrations and flow rates per POD and process.
- (iii) The number of batches per year for each batch process.
- (iv) The operating hours per year for continuous processes.
- (v) The number of batches and the number of operating hours for processes that contain both batch and continuous operations.
- (vi) The number of tank turnovers per year, if used in an emissions average or for determining applicability of a new PAI process unit.
- (vii) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in § 63.1365(b)(11).
- (viii) Periods of planned routine maintenance as described in § 63.1362(c)(5).

Authority for Requirement: 567 IAC 23.1(4)"bm"
40 CFR 63, Subpart MMM

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 384**Associated Equipment**

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-13-377	Water Collection Tank	Herbicide	2,564 gallons

Applicable Requirements**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

The emissions from this emission point shall not exceed the levels specified below.

There are no applicable emission limits for this emission unit at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

40 CFR 63 Subpart MMM "Pesticide Active Ingredient Production":

Standards:

40 CFR 63.1362(b)(2)

- (ii) Uncontrolled organic HAP emissions from a process vent shall be reduced by 98 percent by weight.
- (iii) Excluding process vents that are subject to the requirements in paragraph (b)(2)(ii) of this section, uncontrolled organic HAP emissions from the sum of all process vents within a process shall be reduced by 90 percent or greater by weight.

40 CFR 63.1362(b)(3)

- (ii) HCl and Cl₂ emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater or to outlet concentrations less than or equal to 20 ppmv.

Recording and Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

40 CFR 63.1367(b)(6)

The owner or operator of an affected source that complies with the standards for process vents, storage tanks, and wastewater systems shall maintain up-to-date, readily accessible records of the information specified in paragraphs 63.1367(b)(6)(i) through (viii) to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in § 63.1362.

- (i) The initial calculations of uncontrolled and controlled emissions of gaseous organic HAP and HCl per batch for each process.
- (ii) The wastewater concentrations and flow rates per POD and process.
- (iii) The number of batches per year for each batch process.
- (iv) The operating hours per year for continuous processes.
- (v) The number of batches and the number of operating hours for processes that contain both batch and continuous operations.
- (vi) The number of tank turnovers per year, if used in an emissions average or for determining applicability of a new PAI process unit.
- (vii) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in § 63.1365(b)(11).
- (viii) Periods of planned routine maintenance as described in § 63.1362(c)(5).

Authority for Requirement: 567 IAC 23.1(4)"bm"

40 CFR 63, Subpart MMM

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 385

Associated Equipment

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-13-480	Ammonium Chloride Centrifuge	Herbicide	20 ton/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 40 %⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 02-A-869

567 IAC 23.3(2)"d"

⁽¹⁾ Per DNR Air Quality Policy 3-b-08, Opacity Limits, an exceedance of the indicator opacity of "No Visible Emissions" will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. The permit holder shall also file an "indicator opacity exceedance report" with the DNR field office and keep records as required in the policy. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter

Emission Limit(s): 0.1 gr/scf

Authority for Requirement: Iowa DNR Construction Permit 02-A-869

567 IAC 23.3(2)"a"

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

40 CFR 63 Subpart MMM "Pesticide Active Ingredient Production":

Standards:

40 CFR 63.1362(b)(2)

(ii) Uncontrolled organic HAP emissions from a process vent shall be reduced by 98 percent by weight.

(iii) Excluding process vents that are subject to the requirements in paragraph (b)(2)(ii) of this section, uncontrolled organic HAP emissions from the sum of all process vents within a process shall be reduced by 90 percent or greater by weight.

40 CFR 63.1362(b)(3)

(ii) HCl and Cl₂ emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater or to outlet concentrations less than or equal to 20 ppmv.

Recording and Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

40 CFR 63.1367(b)(6)

The owner or operator of an affected source that complies with the standards for process vents, storage tanks, and wastewater systems shall maintain up-to-date, readily accessible records of the information specified in paragraphs 63.1367(b)(6)(i) through (viii) to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in § 63.1362.

- (i) The initial calculations of uncontrolled and controlled emissions of gaseous organic HAP and HCl per batch for each process.
- (ii) The wastewater concentrations and flow rates per POD and process.
- (iii) The number of batches per year for each batch process.
- (iv) The operating hours per year for continuous processes.
- (v) The number of batches and the number of operating hours for processes that contain both batch and continuous operations.
- (vi) The number of tank turnovers per year, if used in an emissions average or for determining applicability of a new PAI process unit.
- (vii) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in § 63.1365(b)(11).
- (viii) Periods of planned routine maintenance as described in § 63.1362(c)(5).

Authority for Requirement: 567 IAC 23.1(4)"bm"
40 CFR 63, Subpart MMM

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 64

Stack Diameter (inches): 4

Stack Exhaust Flow Rate (scfm): 10.5

Stack Temperature (°F): 140

Downward Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 02-A-869

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 386**Associated Equipment**

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-13-494	Ammonium Chloride Redissolver	Herbicide	654 gallons

Applicable Requirements**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

The emissions from this emission point shall not exceed the levels specified below.

There are no applicable emission limits for this emission unit at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

40 CFR 63 Subpart MMM "Pesticide Active Ingredient Production":

Standards:

40 CFR 63.1362(b)(2)

- (ii) Uncontrolled organic HAP emissions from a process vent shall be reduced by 98 percent by weight.
- (iii) Excluding process vents that are subject to the requirements in paragraph (b)(2)(ii) of this section, uncontrolled organic HAP emissions from the sum of all process vents within a process shall be reduced by 90 percent or greater by weight.

40 CFR 63.1362(b)(3)

- (ii) HCl and Cl₂ emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater or to outlet concentrations less than or equal to 20 ppmv.

Recording and Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

40 CFR 63.1367(b)(6)

The owner or operator of an affected source that complies with the standards for process vents, storage tanks, and wastewater systems shall maintain up-to-date, readily accessible records of the information specified in paragraphs 63.1367(b)(6)(i) through (viii) to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in § 63.1362.

- (i) The initial calculations of uncontrolled and controlled emissions of gaseous organic HAP and HCl per batch for each process.
- (ii) The wastewater concentrations and flow rates per POD and process.
- (iii) The number of batches per year for each batch process.
- (iv) The operating hours per year for continuous processes.
- (v) The number of batches and the number of operating hours for processes that contain both batch and continuous operations.
- (vi) The number of tank turnovers per year, if used in an emissions average or for determining applicability of a new PAI process unit.
- (vii) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in § 63.1365(b)(11).
- (viii) Periods of planned routine maintenance as described in § 63.1362(c)(5).

Authority for Requirement: 567 IAC 23.1(4)"bm"
40 CFR 63, Subpart MMM

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Unit Services

Emission Point Number	Associated Emission Unit Number(s)	Associated Emission Unit Description
EP 1	EU-13-TK-101	Wastewater Equalization Tank
EP 2	EU-13-TK-102	Wastewater Equalization Tank
EP 14	EU-2927-01-220	Wastewater Equalization Tank
EP 21	EU-1734-101	Boiler #5
EP 33	EU-2691-101-1	Boiler #6 Natural Gas Combustion
	EU-2691-101-2	Boiler #6 Fuel Oil Combustion
EP 45	EU-2691-100-1	Boiler #7 Natural Gas Combustion
	EU-2691-100-2	Boiler #7 Fuel Oil Combustion
EP 124	EU-2927-02-140	Lime Storage Silo
EP 129	EU-5-FUG-AGWT	Wastewater Treatment Plant Fugitives
EP 195	EU-3819-1-115-1	Boiler #8 Coal Combustion
	EU-3819-1-115-2	Boiler #8 Waste Treatment Sludge Combustion
EP 196A	EU-3819-1-132	Ash Handling System
EP 196B		
EP 196C		
EP 197	EU-3819-1-105	Coal Handling System
EP 184	EU-N-FAB-SHOP	North Welding Shop
EP 185	EU-N-FAB-SHOP	South Welding Shop
EP 226	EU-CAC-SHOP	CAC Welding Shop
EP 227	EU-AUNIT-SHOP	A-Unit Welding Shop
EP 228	EU-FORM-SHOP	Formulations Welding Shop
EP 229	EU-TECH-SHOP	Tech Welding Shop
EP 230	EU-MAIN-SHOP	Main Welding Shop
EP 231	EU-MAIN-SHOP2	Main Welding Shop Vent 2
EP 232	EU-SHAW-SHOP	Shaw Welding Shop
EP 233	EU-EI-SHOP	E&I Welding Shop
EP 287	EU-5-0295	#2 Fuel Oil Storage Tank
EP 324	EU-FS-01	Gasoline Storage Tank
EP 325	EU-FS-02	Diesel Fuel Storage Tank
EP 390	EU-15-CNP	Trim Pit

Emission Point ID Numbers: EP 1, EP 2, EP 14

Associated Equipment

Emission Point	Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EP 1	EU-13-TK-101	Wastewater Equalization Tank	Wastewater	5,300,000 gallons
EP 2	EU-13-TK-102	Wastewater Equalization Tank	Wastewater	5,300,000 gallons
EP 14	EU-2927-01-220	Wastewater Equalization Tank	Wastewater	10,500,000 gallons

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

There are no applicable emission limits for these emission units at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

40 CFR 63 Subpart MMM "Pesticide Active Ingredient Production":

Standards:

Any equipment handling wastewater as defined in 63.1361 shall comply to all applicable requirements of 63.1362(d).

Recording and Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

40 CFR 63.1367(b)(6)

The owner or operator of an affected source that complies with the standards for process vents, storage tanks, and wastewater systems shall maintain up-to-date, readily accessible records of the information specified in paragraphs 63.1367(b)(6)(i) through (viii) to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in § 63.1362.

- (i) The initial calculations of uncontrolled and controlled emissions of gaseous organic HAP and HCl per batch for each process.
- (ii) The wastewater concentrations and flow rates per POD and process.
- (iii) The number of batches per year for each batch process.
- (iv) The operating hours per year for continuous processes.
- (v) The number of batches and the number of operating hours for processes that contain both batch and continuous operations.

- (vi) The number of tank turnovers per year, if used in an emissions average or for determining applicability of a new PAI process unit.
- (vii) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in § 63.1365(b)(11).
- (viii) Periods of planned routine maintenance as described in § 63.1362(c)(5).

Authority for Requirement: 567 IAC 23.1(4)"bm"
40 CFR 63, Subpart MMM

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 21

Associated Equipment

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-1734-101	Boiler #5	Natural Gas	72.9 MMBtu/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 40 %

Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter

Emission Limit(s): 0.8 lb/MMBtu

Authority for Requirement: 567 IAC 23.3(2)"b"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

Authority for Requirement: 567 IAC 23.3(3)"e"

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:

1. The use of Boiler #5 shall be restricted to firing natural gas, and the use of fuel oil is herein prohibited.

Authority for Requirement: Iowa DNR Construction Permit 92-A-114

40 CFR Part 63 Subpart DDDDD "National Emissions Standards for Hazardous Air Pollutant for Industrial, Commercial, and Institutional Boilers and Process Heaters".

- This boiler is an affected boiler as defined by this Subpart. This boiler is considered to be an "existing large gaseous fuel unit". As stated in 40 CFR 63.7506"b", this boiler is subject only to the Initial Notification requirement in 63.9. The Initial Notification must be submitted to the Administrator within 120 calendar days after the effective date of the standard.

Authority for Requirement: 40 CFR Part 63 Subpart DDDDD

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 33

Associated Equipment

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-2691-101-1	Boiler #6 Natural Gas Combustion	Natural Gas	72.9 MMBtu/hr
EU-2691-101-2	Boiler #6 Fuel Oil Combustion	Fuel Oil	515 gal/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 40 %

Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: PM-10

Emission Limit(s): 5.0 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 76-A-265-S3

Pollutant: Particulate Matter

Emission Limit(s): 0.8 lb/MMBtu

Authority for Requirement: Iowa DNR Construction Permit 76-A-265-S3
567 IAC 23.3(2)"b"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 36.6 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 76-A-265-S3

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:

1. The fuel oil firing rate for the B-6 boiler shall not exceed an average of:
 - 390 gal/hr for any calendar day during which the B-7 boiler is burning fuel oil or
 - 515 gal/hr during any calendar day during which the B-7 boiler is not burning fuel oil.
2. The maximum sulfur content of the fuel oil burned shall not exceed 0.5%.

Reporting & Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. The amount of fuel oil burned each calendar day in the B-6 boiler.
2. Hours of operation for the B-6 and B-7 boilers when burning fuel oil.
3. The sulfur content and the type of fuel burned in the B-6 boiler.

Authority for Requirement: Iowa Construction Permit 76-A-265-S3

40 CFR Part 63 Subpart DDDDD "National Emissions Standards for Hazardous Air Pollutant for Industrial, Commercial, and Institutional Boilers and Process Heaters".

- This boiler is an affected boiler as defined by this Subpart. This boiler is considered to be an "existing large gaseous fuel unit" and an "existing large liquid fuel unit. As stated in 40 CFR 63.7506"b", this boiler is subject only to the Initial Notification requirement in 63.9. The Initial Notification must be submitted to the Administrator within 120 calendar days after the effective date of the standard.

Authority for Requirement: 40 CFR Part 63 Subpart DDDDD

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 82

Stack Diameter (feet): 3.54

Stack Exhaust Flow Rate (scfm): 15,500

Stack Temperature (°F): 385

Vertical, Unobstructed Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 76-A-265-S3

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 45

Associated Equipment

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-2691-100-1	Boiler #7 Natural Gas Combustion	Natural Gas	123.5 MMBtu/hr
EU-2691-100-2	Boiler #7 Fuel Oil Combustion	Fuel Oil	865 gal/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 40 %

Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: PM-10

Emission Limit(s): 10.0 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 76-A-161-S3

Pollutant: Particulate Matter

Emission Limit(s): 0.8 lb/MMBtu

Authority for Requirement: Iowa DNR Construction Permit 76-A-161-S3
567 IAC 23.3(2)"b"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 61.4 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 76-A-161-S3

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:

1. The fuel oil firing rate for the B-7 boiler shall not exceed an average of:
 - 650 gal/hr for any calendar day during which the B-6 boiler is burning fuel oil or
 - 865 gal/hr during any calendar day during which the B-6 boiler is not burning fuel oil.
2. The maximum sulfur content of the fuel oil burned shall not exceed 0.5%.

Reporting & Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. The amount of fuel oil burned each calendar day in the B-7 boiler.
2. Hours of operation for the B-6 and B-7 boilers when burning fuel oil.
3. The sulfur content and type of fuel burned in the B-7 boiler.

Authority for Requirement: Iowa DNR Construction Permit 76-A-161-S3

40 CFR Part 63 Subpart DDDDD "National Emissions Standards for Hazardous Air Pollutant for Industrial, Commercial, and Institutional Boilers and Process Heaters".

- This boiler is an affected boiler as defined by this Subpart. This boiler is considered to be an "existing large gaseous fuel unit" and an "existing large liquid fuel unit. As stated in 40 CFR 63.7506"b", this boiler is subject only to the Initial Notification requirement in 63.9. The Initial Notification must be submitted to the Administrator within 120 calendar days after the effective date of the standard.

Authority for Requirement: 40 CFR Part 63 Subpart DDDDD

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 80

Stack Diameter (feet): 4.5

Stack Exhaust Flow Rate (scfm): 26,800

Stack Temperature (°F): 355

Vertical, Unobstructed Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 76-A-161-S3

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 124**Associated Equipment**

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity
EU-2927-02-140	Lime Storage Silo	CE-2927-02-140: Dust Collector	Lime	10 tons/hr

Applicable Requirements**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 40 %

Authority for Requirement: 567 IAC 23.3(2)"d"

Pollutant: Particulate Matter

Emission Limit(s): 19.2 lb/hr⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 76-A-133

567 IAC 23.3(2)"a"

⁽¹⁾ Based on process weight of 10 tons/hr.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☒ No ☐

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

Facility operation and maintenance plans are to be developed by the facility within six(6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 129

Associated Equipment

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-5-FUG-AGWT	Wastewater Treatment Plant Fugitives	Wastewater	NA

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

There are no applicable emission limits for this emission unit at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

40 CFR 63 Subpart MMM "Pesticide Active Ingredient Production":

Standards:

Any equipment handling wastewater as defined in 63.1361 shall comply with all applicable requirements of 63.1362(d).

Recording and Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

40 CFR 63.1367(b)(6)

The owner or operator of an affected source that complies with the standards for process vents, storage tanks, and wastewater systems shall maintain up-to-date, readily accessible records of the information specified in paragraphs 63.1367(b)(6)(i) through (viii) to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in § 63.1362.

- (i) The initial calculations of uncontrolled and controlled emissions of gaseous organic HAP and HCl per batch for each process.
- (ii) The wastewater concentrations and flow rates per POD and process.
- (iii) The number of batches per year for each batch process.
- (iv) The operating hours per year for continuous processes.
- (v) The number of batches and the number of operating hours for processes that contain both batch and continuous operations.
- (vi) The number of tank turnovers per year, if used in an emissions average or for determining applicability of a new PAI process unit.
- (vii) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in § 63.1365(b)(11).

(viii) Periods of planned routine maintenance as described in § 63.1362(c)(5).

Authority for Requirement: 567 IAC 23.1(4)"bm"
40 CFR 63, Subpart MMM

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 195

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Monitoring Equipment	Raw Material	Rated Capacity
EU-3819-1-115-1	Boiler #8 Coal Combustion	CE-3819-1-115: Dust Collector	ME-3819-1-115-C – Diluent O ₂ ME-3819-1-115-O – Opacity ME-3819-1-115-SN – SO ₂ & NO _x	Coal	150 MMBtu/hr
EU-3819-1-115-2	Boiler #8 Waste Treatment Sludge Combustion			Sludge	417 lb/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 20%⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 82-A-092-S7
EPA PSD Permit dated November 12, 1982

Pollutant: Particulate Matter

Emission Limit(s): 0.03 lb/MMBtu

Authority for Requirement: Iowa DNR Construction Permit 82-A-092-S7
EPA PSD Permit dated November 12, 1982

Emission Limit(s): 7.5 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 82-A-092-S7

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 1.95 lb/MMBtu⁽²⁾

Authority for Requirement: Iowa DNR Construction Permit 82-A-092-S7
EPA PSD Permit dated November 12, 1982

Emission Limit(s): 292.5 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 82-A-092-S7

Pollutant: Nitrogen Oxides (NO_x)

Emission Limit(s): 0.6 lb/MMBtu⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 82-A-092-S7
EPA PSD Permit dated November 12, 1982

Emission Limit(s): 90.0 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 82-A-092-S7

Pollutant: Mercury (Hg)

Emission Limit(s): 3200 grams/24 hours⁽⁴⁾

Authority for Requirement: Iowa DNR Construction Permit 82-A-092-S7
567 IAC 23.1(3)"d"
40 CFR Part 61 Subpart E

⁽¹⁾ 6-minute average

⁽²⁾ 3-hour rolling average

⁽³⁾ 30-day rolling average

⁽⁴⁾ Limit applies on the days when wastewater treatment plant sludge is burned in the boiler. Compliance may be demonstrated by an analysis of the mercury content of the sludge in accordance with 40 CFR 61.54.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:

1. Sludge material from the Monsanto Company wastewater treatment plant may be burned in the B-8 boiler, except during periods of startup, at which time only coal may be burned. The composition of coal and sludge shall be as described by Monsanto Company letters dated Nov. 8, 1985 and Dec. 11, 1985.
2. No more than 10,000 lbs/day of the sludge material, on a dry solids basis, shall be burned in the B-8 boiler.

Authority for Requirement: Iowa DNR Construction Permit 82-A-092-S7

By-pass Provisions:

Except as provided below, bypassing of the boiler's particulate matter emission control device is prohibited.

1. Bypassing during periods of startup shall be limited to a total of twenty (20) hours per calendar year. During each startup, the owner/operator shall proceed through the startup phase as expeditiously as possible taking into account safety related, mechanical, and/or operational considerations. For each said bypass, the owner/operator shall record the date, time, and duration of the bypass.
2. Bypassing during periods other than periods of startup is prohibited and shall be considered a violation unless the owner/operator subsequently demonstrates to the PSD-implementing agency's satisfaction that the bypass occurred during an unavoidable malfunction condition (as defined in 40 CFR 60.2 of the federal NSPS regulations).

Authority for Requirement: EPA PSD Permit November 12, 1982

Work practice standards:

1. At all times, including periods of startup, shutdown, and malfunction, the owner/operator shall, to the extent practicable, maintain and operate Boiler #8 (including associated air pollution control equipment) in a manner consistent with good air pollution control practice for minimizing emissions.

Authority for Requirement: EPA PSD Permit November 12, 1982

Reporting:

1. The owner/operator shall, on a calendar quarter basis, report periods of excess emissions (i.e., periods when the computed emission estimate(s) exceed the "3-hour rolling average" or the "30-day rolling average" emission limitation(s), and 6-minute periods when the opacity standard is exceeded) in accordance with the quarterly reporting requirements outlined in 40 CFR 60.7 of the federal NSPS regulations.
2. For each bypass occurring during periods other than periods of startup of the boiler, the owner/operator shall prepare a written report containing the following information: (1) the date, time, and duration of the bypass, (2) an explanation of why the bypass could not be avoided, (3) a listing of the factors which contributed to the bypass condition, and (4) a statement of what the owner/operator has done (or will do) to prevent the condition from reoccurring. Each report shall be submitted to the PSD implementing agency within seven (7) days of the occurrence.

Authority for Requirement: EPA PSD Permit November 12, 1982

Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

- A. The owner/operator shall maintain records of the following information and a daily basis.
 1. Calendar date, and the 3 hour rolling average SO₂ emission rates (in terms of lbs/MMBtu and lb/hr).
 2. The average NO_x emission rates (in terms of lb/MMBtu) for each 30 successive boiler operating days, ending with the last 30-day period in the quarter. (EPA PSD Permit November 12, 1982 only)
 3. Opacity readings
 4. Amount of sludge material burned in B-8, on a dry weight basis.
 5. Reasons for noncompliance with the emission standards, and description of corrective action taken.
 6. Identification of the boiler operating days for which emission or opacity data have not been obtained; justification for not obtaining sufficient data; and a description of corrective actions taken.
 7. Identification of the times when emission data have been excluded from the calculation of average emission rates because of startup, shutdown, malfunction, or other reasons, and justification for excluding data for reasons other than startup, shutdown or malfunction.
 8. Identification of the "F" factor(s) used for calculations.
 9. Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system.
 10. Description of any modifications to the continuous monitoring system which could affect the ability of the continuous monitoring system to comply with the Performance Specifications of Appendix B of the Federal NSPS regulations.

- B. The owner/operator shall maintain the following records as required below.
1. For each bypass during startup, the owner/operator shall record the date, time, and duration of the bypass.
 2. The permittee shall comply with all applicable requirements of 40 CFR Part 61, Subpart E, including:
 - § 61.54 – Sludge Sampling
 - Monsanto Company – Muscatine performed sludge sampling on June 6th and 7th, 2003 to demonstrate compliance with 40 CFR 60.52(b). The resultant Mercury emission rate was 0.00013 lb/day.

Authority for Requirement: Iowa DNR Construction Permit 82-A-092-S7
EPA PSD Permit November 12, 1982
567 IAC 23.1(3)"d"
40 CFR Part 61 Subpart E

40 CFR Part 63 Subpart DDDDD "National Emissions Standards for Hazardous Air Pollutant for Industrial, Commercial, and Institutional Boilers and Process Heaters".

- This boiler is an affected boiler as defined by this Subpart. This boiler is considered to be an "existing large solid fuel unit". Monsanto shall submit an Initial Notification, as defined in 63.9, to the Administrator within 120 calendar days after the effective date of the standard. Monsanto must comply with all applicable requirements of this subpart no later than three (3) years after publication of the subpart.

Authority for Requirement: 40 CFR Part 63 Subpart DDDDD

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 150

Stack Diameter (inches): 54

Stack Exhaust Flow Rate (scfm): 35,200

Stack Temperature (°F): 350

Vertical, Unobstructed Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 82-A-092-S7

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Stack Testing Completed:

Pollutant – Particulate Matter
Stack Test Completed – 11/24/03
Test Method – Iowa Compliance Sampling Manual Method 5
Result Concentration – 0.014 lb/MMBtu
Result lb/hr – 1.98 lb/hr
Authority for Requirement – Iowa DNR Construction Permit 82-A-092-S7

Continuous Emissions Monitoring:

Pollutant - Opacity
Operational Specifications – 40 CFR 60 Appendix B, Specification 1
Date of Initial System Calibration and Quality Assurance – 6/11/03
Ongoing System Calibration/Quality Assurance – 40 CFR 60 Appendix F
Reporting & Record keeping – 40 CFR 60.7
Authority for Requirement – Iowa DNR Construction Permit 82-A-092-S7
EPA PSD Permit November 12, 1982

Pollutant – Sulfur Dioxide (SO₂)
Operational Specifications – 40 CFR 60 Appendix B, Specification 2
Date of Initial System Calibration and Quality Assurance – 6/11/03
Ongoing System Calibration/Quality Assurance – 40 CFR 60 Appendix F
Reporting & Record keeping – 40 CFR 60.7
Authority for Requirement – Iowa DNR Construction Permit 82-A-092-S7
EPA PSD Permit November 12, 1982

Pollutant – Nitrogen Oxides (NO_x)
Operational Specifications – 40 CFR 60 Appendix B, Specification 2
Date of Initial System Calibration and Quality Assurance – 6/11/03
Ongoing System Calibration/Quality Assurance – 40 CFR 60 Appendix F
Reporting & Record keeping – 40 CFR 60.7
Authority for Requirement – EPA PSD Permit November 12, 1982

Pollutant – Oxygen (O₂) or Carbon Dioxide (CO₂)
Operational Specifications – 40 CFR 60 Appendix B, Specification 3
Date of Initial System Calibration and Quality Assurance – 11/14/95
Ongoing System Calibration/Quality Assurance – 40 CFR 60 Appendix F
Reporting & Record keeping – 40 CFR 60.7
Authority for Requirement – Iowa DNR Construction Permit 82-A-092-S7
EPA PSD Permit November 12, 1982

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

Agency Approved Operation & Maintenance Plan Required? Yes ☒ No ☐

Facility: Monsanto Company – Muscatine
EIQ Number: 92-6909
Emission Unit: EU-3819-1-115-1 Boiler #8
Emission Point: EP 195 Boiler #8 Stack
Control Equipment: CE-3819-1-115 Dust Collector

Monitoring Guidelines

The Monsanto Company – Muscatine Facility makes a commitment to take timely corrective action during periods of excursion where the indicators are out of range. A corrective action may include an investigation of the reason for the excursion, evaluation of the situation and necessary follow-up action to return operation within the indicator range. The averaged discrete data point determines an excursion over a period of time. An excursion does not necessarily indicate a violation of an applicable requirement.

If the corrective action measures fail to return the indicators to the appropriate range, the facility will report the exceedance to the department and conduct source testing within 90 days of the exceedance to demonstrate compliance with applicable requirements. If the test demonstrates compliance with emission limits then new indicator ranges must be set for monitoring and the new ranges must be incorporated in the operating permit. If the test demonstrates noncompliance with emission limits, then the facility, within 60 days, proposes a schedule to implement corrective action to bring the source into compliance and demonstrate compliance.

Monitoring Methods and Corrective Actions

General

- Periodic monitoring is not required during periods of time greater than one day in which the Boiler #8 does not operate.

Continuous Monitoring

- Opacity is monitored continuously through a distributed control system. If the opacity exceeds twenty percent, it will sound an audible alarm to notify operating personnel. At that time standard operating procedures will be followed to reduce opacity to the normal operating range. This may include isolation of the baghouse module creating the excess opacity, and a thorough inspection of the bags. If required, bag replacement will be documented with the date, time, and location of the bag(s) replaced. The location will be identified through a bag layout diagram. If opacity exceeds twenty percent for a non-exempted six-minute average, this would be a permit violation. Baghouse pressure drop is monitored continuously through a distributed control system. If the baghouse pressure drop exceeds the normal operating range, it will sound an audible alarm to notify operating personnel. At that time standard operating procedures will be followed to return the baghouse pressure drop to the normal operating range.

Monthly Monitoring

- Once per month the baghouse cleaning sequence will be checked. This includes checking the cleaning sequence valve operation and the air delivery system for proper operation. If abnormal operation is detected, measures for remediation will be implemented within 8 hours.
- Once per month the baghouse hopper functions and performance will be checked. If abnormal operation is detected, measures for remediation will be implemented within 8 hours.

Semiannual Monitoring

- Every 6 months, all external components, including structural components and ductwork, will be inspected. If leaks or abnormal conditions are detected, measures for remediation will be implemented within 8 hours if Boiler #8 is operating. If Boiler #8 is not operating, the abnormal condition will be corrected before returning to service.

Annual Monitoring

- The bags and internal structure will be inspected once per year. If leaks or abnormal conditions are detected, measures for remediation will be implemented before returning the boiler to service. Bag replacement will be documented with the date, time, and location of the bag(s) replaced. The location will be identified through a bag layout diagram.

Record Keeping and Reporting

- A written or electronic record will be created for required inspections, along with any action resulting from the inspection.
- Maintenance and inspection records will be kept for five years and will be available for review upon request by an authorized regulatory agency.

Quality Control

- The equipment and associated instruments will be operated and maintained according to the manufacturer's recommendations.
- An adequate spare parts inventory is maintained through a computerized inventory management system.
- The continuous opacity monitor is properly tested and maintained as part of the Quality Assurance Plan for the Boiler #8 Continuous Emission Monitoring System, to meet the specific requirement of 40 CFR 60.

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Numbers: EP 196A, EP 196B, 196C

Associated Equipment

Emission Point	Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
EP 196A	EU-3819-1-132	Ash Handling System	CE-3819-1-132: Dust Collector	Ash	1080 lb/hr	82-A-093-S1
EP 196B						02-A-790
EP 196C			CE-3819-1-132-FV: Filter Vent			03-A-636

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from these emission points shall not exceed the levels specified below.

EP's 196A and 196B

Pollutant: Opacity

Emission Limit(s): 40 %⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permits 82-A-093-S1 and 02-A-790
567 IAC 23.3(2)"d"

Pollutant: Opacity

Emission Limit(s): 20 %⁽²⁾

Authority for Requirement: EPA PSD Permit November 12, 1982

Pollutant: PM-10

Emission Limit(s): 0.13 lb/hr⁽³⁾

Authority for Requirement: Iowa DNR Construction Permits 82-A-093-S1 and 02-A-790

Pollutant: Particulate Matter

Emission Limit(s): 0.13 lb/hr⁽³⁾, 0.1 gr/scf

Authority for Requirement: Iowa DNR Construction Permits 82-A-093-S1 and 02-A-790
567 IAC 23.3(2)"a"

Pollutant: Particulate Matter

Emission Limit(s): 0.01 gr/dscf

Authority for Requirement: EPA PSD Permit November 12, 1982

⁽¹⁾ Per DNR Air Quality Policy 3-b-08, Opacity Limits, an exceedance of the indicator opacity of **no visible emissions** will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. The permit holder shall also file an "indicator opacity exceedance report" with the DNR field office and keep records as required in the policy. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

⁽²⁾ 6-minute average

⁽³⁾ Limit is for stacks EP 196A, EP 196B, and EP 196C combined

EP 196C

Pollutant: Opacity

Emission Limit(s): 20 %⁽²⁾

Authority for Requirement: Iowa DNR Construction Permit 03-A-636
EPA PSD Permit November 12, 1982

Pollutant: Particulate Matter

Emission Limit(s): 0.01 gr/scf

Authority for Requirement: Iowa DNR Construction Permit 03-A-636
EPA PSD Permit November 12, 1982

Emission Limit(s): 0.13 lb/hr^{(3), (4)}

Authority for Requirement: Iowa DNR Construction Permit 03-A-636

⁽²⁾ 6-minute average

⁽³⁾ Limit is for stacks EP 196A, EP 196B, and EP 196C combined

⁽⁴⁾ Standard is expressed as the average of 3 runs

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Control equipment parameters:

1. Operate and maintain the baghouse according to the manufacturer's specifications.

Authority for Requirement: Iowa DNR Construction Permits 82-A-093-S1 and 02-A-790

Emission Point Characteristics

Each emission point shall conform to the specifications listed below.

EP	Stack Height (ft., from the ground)	Stack Opening (inches,)	Exhaust Flow Rate (scfm)	Exhaust Temperature (°F)	Discharge Style	Authority for Requirement
196A	23	6 (diameter)	1500	Ambient	Horizontal	82-A-093-S1
196B	23	6 (diameter)	1500	Ambient	Horizontal	02-A-790
196C	33	18 x 26	Displacement	70	Vertical Obstructed	03-A-636

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Opacity:

The facility shall check the opacity weekly during a period when the emission unit on this emission point is at or near full capacity and record the reading. Maintain a written record of the observation and any action resulting from the observation for a minimum of five years. The facility shall use EPA Method 9 with a certified smoke reader for the monitoring method.

If an opacity > 20% is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet. At least three attempts shall be made to retake opacity readings at approximately 2-hour intervals throughout the day. If all observation attempts for a week have been unsuccessful due to weather, an observation shall be made the next operating day where weather permits.

Stack Testing Completed: EP 196A and 196B

Pollutant – PM/PM-10⁽¹⁾

Stack Test Completed – 4/8-9/2003

Result Emission Rate – 0.0493 lb/hr

Result Concentration – 0.010 gr/dscf

Authority for Requirement – Iowa DNR Construction Permits 82-A-093-S1, 02-A-790

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☒ No ☐

(required for CE-3819-1-132 and CE-3819-1-132-FV)

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

Facility operation and maintenance plans are to be developed by the facility within six(6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 197

Associated Equipment

Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
EU-3819-1-105	Coal Handling System	CE-3819-1-105: Dust Collector	Coal	50 ton/hr	82-A-094

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 20 %⁽¹⁾

Authority for Requirement: EPA PSD Permit November 12, 1982

Pollutant: Particulate Matter

Emission Limit(s): 0.01 gr/scf

Authority for Requirement: EPA PSD Permit November 12, 1982

⁽¹⁾ 6-minute average

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Opacity:

The facility shall check the opacity weekly during a period when the emission unit on this emission point is at or near full capacity and record the reading. Maintain a written record of the observation and any action resulting from the observation for a minimum of five years. The facility shall use EPA Method 9 with a certified smoke reader for the monitoring method.

If an opacity > 20% is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet. At least three attempts shall be made to retake opacity readings at approximately 2-hour intervals throughout the day. If all observation attempts for a week have been unsuccessful due to weather, an observation shall be made the next operating day where weather permits.

Stack Testing:

Pollutant – Particulate Matter

Stack Test to be Completed by – Within two (2) years from permit issuance

Test Method – 40 CFR Part 60 Appendix A, Method 5

Authority for Requirement – 567 IAC 22.108(3)

The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☒ No ☐

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

Facility operation and maintenance plans are to be developed by the facility within six(6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)"b"

**Emission Point ID Numbers: EP 184, EP 185, EP 226, EP 227, EP 228,
EP 229, EP 230, EP 231, EP 232, EP 233**

Associated Equipment

Emission Point	Emission Unit	Emission Unit Description	Control Equipment	Raw Material	Rated Capacity	Construction Permit
EP 184	EU-N-FAB-SHOP	North Welding Shop	CE-N-FAB-SHOP: Bag Filter	Welding Rods	10 lb/hr	83-A-022
EP 185	EU-S-FAB-SHOP	South Welding Shop	CE-S-FAB-SHOP: Bag Filter	Welding Rods	10 lb/hr	83-A-023
EP 226	EU-CAC-SHOP	CAC Welding Shop	CE-CAC-SHOP: Bag Filter	Welding Rods	10 lb/hr	87-A-191
EP 227	EU-AUNIT-SHOP	A-Unit Welding Shop	CE-AUNIT-SHOP: Bag Filter	Welding Rods	10 lb/hr	87-A-192
EP 228	EU-FORM-SHOP	Formulations Welding Shop	CE-FORM-SHOP: Bag Filter	Welding Rods	10 lb/hr	87-A-193
EP 229	EU-TECH-SHOP	Tech Welding Shop	CE-TECH-SHOP: Bag Filter	Welding Rods	10 lb/hr	87-A-194
EP 230	EU-MAIN-SHOP	Main Welding Shop	CE-MAIN-SHOP: Bag Filter	Welding Rods	10 lb/hr	87-A-195-S2
EP 231	EU-MAIN-SHOP2	Main Welding Shop Vent 2	CE-MAIN-SHOP2: Bag Filter	Welding Rods	10 lb/hr	87-A-196
EP 232	EU-SHAW-SHOP	Shaw Welding Shop	CE-SHAW-SHOP: Bag Filter	Welding Rods	10 lb/hr	87-A-197
EP 233	EU-EI-SHOP	E&I Welding Shop	CE-EI-SHOP: Bag Filter	Welding Rods	10 lb/hr	87-A-198

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from each emission point shall not exceed the levels specified below.

EP	Opacity	PM	Authority for Requirement
184	40%	0.12 lb/hr ⁽²⁾	83-A-022, 567 IAC 23.3(2)"d"
185	40%	0.12 lb/hr ⁽²⁾	83-A-023, 567 IAC 23.3(2)"d"
226	40%	0.12 lb/hr ⁽²⁾	87-A-191, 567 IAC 23.3(2)"d"
227	40%	0.12 lb/hr ⁽²⁾	87-A-192, 567 IAC 23.3(2)"d"
228	40%	0.12 lb/hr ⁽²⁾	87-A-193, 567 IAC 23.3(2)"d"
229	40%	0.12 lb/hr ⁽²⁾	87-A-194, 567 IAC 23.3(2)"d"
230	40% ⁽¹⁾	0.12 lb/hr ⁽³⁾ , 0.1 gr/dcf	87-A-195-S2, 567 IAC 23.3(2)"d", 23.3(2)"a"
231	40%	0.12 lb/hr ⁽²⁾	87-A-196, 567 IAC 23.3(2)"d"
232	40%	0.12 lb/hr ⁽²⁾	87-A-197, 567 IAC 23.3(2)"d"
233	40%	0.12 lb/hr ⁽²⁾	87-A-198, 567 IAC 23.3(2)"d"

⁽¹⁾ Per DNR Air Quality Policy 3-b-08, Opacity Limits, the presence of visible emissions will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. The permit holder shall also file an "indicator opacity exceedance report" with the DNR field office and keep records as required in the policy. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

⁽²⁾Based on process weight of 10 lb/hr.

⁽³⁾ Emission limit based on a three-hour averaging time

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

EP 230

Process throughput:

1. The emission units that exhaust from this emission point shall not operate for more than 240 hours per rolling twelve-month period.

Control equipment parameters:

1. The control equipment shall be inspected and maintained according to manufacturer's specifications.

Reporting & Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. The owner or operator shall maintain a record of control equipment maintenance and inspection results.
2. The owner or operator shall maintain a record of the hours the emission units that exhaust from this emission point operate, each instance of operation.
3. The owner or operator shall calculate a monthly total of the hours the emission units that exhaust from this emission point operate and calculate a rolling twelve-month total.

Authority for Requirement: Iowa DNR Construction Permit 87-A-195-S2

Emission Point Characteristics

EP 230 shall conform to the specifications listed below.

Stack Height (feet): 35

Stack Diameter (inches): 11

Stack Exhaust Flow Rate (scfm): 2,400

Stack Temperature (°F): 70

Vertical, Unobstructed Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 87-A-195-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☒ No ☐

(Required for all control equipment listed above)

Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.

Facility operation and maintenance plans are to be developed by the facility within six(6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.

Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 287**Associated Equipment**

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-5-0295	#2 Fuel Oil Storage Tank	#2 Fuel Oil	50,000 gallons

Applicable Requirements**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Volatile Organic Compounds (VOC's)

Emission Limit(s): 1 ton/year

Authority for Requirement: Iowa DNR Construction Permit 95-A-622

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:

1. Volatile organic liquid compounds stored in this vessel shall have a vapor pressure not greater than 3.5 kiloPascals.

Authority for Requirement: Iowa DNR Construction Permit 95-A-622

Reporting & Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. The owner/operator shall maintain records showing the vapor pressure of the liquid stored in this tank.

Authority for Requirement: 567 IAC 22.108(4)

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 324**Associated Equipment**

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-FS-01	Gasoline Storage Tank	Gasoline	4,000 gallons

Applicable Requirements**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

The emissions from this emission point shall not exceed the levels specified below.

There are no applicable emission limits for this emission unit at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:

1. The usage of gasoline cannot exceed 200,000 gallons per year from this source.

Reporting & Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. Record the date and amount each time this tank is filled.

Authority for Requirement: Iowa DNR Construction Permit 97-A-753

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 11

Stack Diameter (inches): 3

Stack Exhaust Flow Rate (acfm): 1

Stack Temperature (°F): Ambient

Vertical, Unobstructed Discharge Required: Yes ☐ No ☒

Authority for Requirement: Iowa DNR Construction Permit 97-A-753

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 325

Associated Equipment

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-FS-02	Diesel Fuel Storage Tank	Diesel Fuel	2,000 gallons

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

There are no applicable emission limits for this emission unit at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Process throughput:

1. The usage of diesel fuel cannot exceed 100,000 gallons per year from this source.

Reporting & Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

1. Record the date and amount each time this tank is filled.

Authority for Requirement: Iowa DNR Construction Permit 97-A-754

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 11

Stack Diameter (inches): 3

Stack Exhaust Flow Rate (acfm): 1

Stack Temperature (°F): Ambient

Vertical, Unobstructed Discharge Required: Yes ☐ No ☒

Authority for Requirement: Iowa DNR Construction Permit 97-A-754

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

Emission Point ID Number: EP 390

Associated Equipment

Emission Unit	Emission Unit Description	Raw Material	Rated Capacity
EU-15-CNP	Trim Pit	Wastewater	72,874 gallons

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

There are no applicable emission limits for this emission unit at this time.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

40 CFR 63 Subpart MMM "Pesticide Active Ingredient Production":

Standards:

Any equipment handling wastewater as defined in 63.1361 shall comply with all applicable requirements of 63.1362(d).

Recording and Record keeping:

Records shall be kept on site for at least five years and shall be available for inspection by the Department.

40 CFR 63.1367(b)(6)

The owner or operator of an affected source that complies with the standards for process vents, storage tanks, and wastewater systems shall maintain up-to-date, readily accessible records of the information specified in paragraphs 63.1367(b)(6)(i) through (viii) to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in § 63.1362.

- (i) The initial calculations of uncontrolled and controlled emissions of gaseous organic HAP and HCl per batch for each process.
- (ii) The wastewater concentrations and flow rates per POD and process.
- (iii) The number of batches per year for each batch process.
- (iv) The operating hours per year for continuous processes.
- (v) The number of batches and the number of operating hours for processes that contain both batch and continuous operations.
- (vi) The number of tank turnovers per year, if used in an emissions average or for determining applicability of a new PAI process unit.
- (vii) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in § 63.1365(b)(11).

(viii) Periods of planned routine maintenance as described in § 63.1362(c)(5).

Authority for Requirement: Iowa DNR Construction Permit 03-A-695
567 IAC 23.1(4)"bm"
40 CFR 63, Subpart MMM

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (feet): 6

Stack Diameter (inches): 6

Stack Exhaust Flow Rate (acfm): Vent

Stack Temperature (°F): 100

Downward Discharge Required: Yes ☒ No ☐

Authority for Requirement: Iowa DNR Construction Permit 03-A-695

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Periodic Monitoring Requirements

The owner/operator of this equipment shall comply with the periodic monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes ☐ No ☒

Facility Maintained Operation & Maintenance Plan Required? Yes ☐ No ☒

Authority for Requirement: 567 IAC 22.108(3)"b"

IV. General Conditions

This permit is issued under the authority of the Iowa Code subsection 455B.133(8) and in accordance with 567 Iowa Administrative Code chapter 22.

G1. Duty to Comply

1. The permittee must comply with all conditions of the Title V permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. *567 IAC 22.108(9)"a"*
2. Any compliance schedule shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based. *567 IAC 22.105 (2)"h"(3)*
3. Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall be enforceable by the administrator and are incorporated into this permit. *567 IAC 22.108 (1)"b"*
4. Unless specified as either "state enforceable only" or "local program enforceable only", all terms and conditions in the permit, including provisions to limit a source's potential to emit, are enforceable by the administrator and citizens under the Act. *567 IAC 22.108 (14)*
5. It shall not be a defense for a permittee, in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. *567 IAC 22.108 (9)"b"*

G2. Permit Expiration

1. Except as provided in 567 IAC 22.104, the expiration of this permit terminates the permittee's right to operate unless a timely and complete application has been submitted for renewal. Any testing required for renewal shall be completed before the application is submitted. *567 IAC 22.116(2)*
2. To be considered timely, the owner, operator, or designated representative (where applicable) of each source required to obtain a Title V permit shall present or mail the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, 7900 Hickman Rd, Suite #1, Urbandale, Iowa 50322, two copies (three if your facility is located in Linn or Polk county) of a complete permit application, at least 6 months but not more than 18 months prior to the date of permit expiration. An additional copy must also be sent to EPA Region VII, Attention: Chief of Air Permits, 901 N. 5th St., Kansas City, KS 66101. The application must include all emission points, emission units, air pollution control equipment, and monitoring devices at the facility. All emissions generating activities, including fugitive emissions, must be included. The definition of a complete application is as indicated in 567 IAC 22.105(2). *567 IAC 22.105*

G3. Certification Requirement for Title V Related Documents

Any application, report, compliance certification or other document submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. All certifications shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. *567 IAC 22.107 (4)*

G4. Annual Compliance Certification

By March 31 of each year, the permittee shall submit compliance certifications for the previous calendar year. The certifications shall include descriptions of means to monitor the compliance status of all emissions sources including emissions limitations, standards, and work practices in accordance with applicable requirements. The certification for a source shall include the identification of each term or condition of the permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, currently and over the reporting period

consistent with all applicable department rules. For sources determined not to be in compliance at the time of compliance certification, a compliance schedule shall be submitted which provides for periodic progress reports, dates for achieving activities, milestones, and an explanation of why any dates were missed and preventive or corrective measures. The compliance certification shall be submitted to the administrator, director, and the appropriate DNR Field office. *567 IAC 22.108 (15)"e"*

G5. Semi-Annual Monitoring Report

By March 31 and September 30 of each year, the permittee shall submit a report of any monitoring required under this permit for the 6 month periods of July 1 to December 31 and January 1 to June 30, respectively. All instances of deviations from permit requirements must be clearly identified in these reports, and the report must be signed by a responsible official, consistent with 567 IAC 22.107(4). The semi-annual monitoring report shall be submitted to the director and the appropriate DNR Field office. *567 IAC 22.108 (5)*

G6. Annual Fee

1. The permittee is required under subrule 567 IAC 22.106 to pay an annual fee based on the total tons of actual emissions of each regulated air pollutant. Beginning July 1, 1996, Title V operating permit fees will be paid on July 1 of each year. The fee shall be based on emissions for the previous calendar year.
2. The fee amount shall be calculated based on the first 4,000 tons of each regulated air pollutant emitted each year. The fee to be charged per ton of pollutant will be available from the department by June 1 of each year. The Responsible Official will be advised of any change in the annual fee per ton of pollutant.
3. The following forms shall be submitted annually by March 31 documenting actual emissions for the previous calendar year.
 - a. Form 1.0 "Facility Identification";
 - b. Form 4.0 "Emissions unit-actual operations and emissions" for each emission unit;
 - c. Form 5.0 "Title V annual emissions summary/fee"; and
 - d. Part 3 "Application certification."
4. The fee shall be submitted annually by July 1. The fee shall be submitted with the following forms:
 - a. Form 1.0 "Facility Identification";
 - b. Form 5.0 "Title V annual emissions summary/fee";
 - c. Part 3 "Application certification."
5. If there are any changes to the emission calculation form, the department shall make revised forms available to the public by January 1. If revised forms are not available by January 1, forms from the previous year may be used and the year of emissions documented changed. The department shall calculate the total statewide Title V emissions for the prior calendar year and make this information available to the public no later than April 30 of each year.
6. Phase I acid rain affected units under section 404 of the Act shall not be required to pay a fee for emissions which occur during the years 1993 through 1999 inclusive.
7. The fee for a portable emissions unit or stationary source which operates both in Iowa and out of state shall be calculated only for emissions from the source while operating in Iowa.
8. Failure to pay the appropriate Title V fee represents cause for revocation of the Title V permit as indicated in 567 IAC 22.115(1)"d".

G7. Inspection of Premises, Records, Equipment, Methods and Discharges

Upon presentation of proper credentials and any other documents as may be required by law, the permittee shall allow the director or the director's authorized representative to:

1. Enter upon the permittee's premises where a Title V source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
4. Sample or monitor, at reasonable times, substances or parameters for the purpose of ensuring compliance with the permit or other applicable requirements. *567 IAC 22.108 (15)"b"*

G8. Duty to Provide Information

The permittee shall furnish to the director, within a reasonable time, any information that the director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the director copies of records required to be kept by the permit, or for information claimed to be confidential, the permittee shall furnish such records directly to the administrator of EPA along with a claim of confidentiality. *567 IAC 22.108 (9)"e"*

G9. General Maintenance and Repair Duties

The owner or operator of any air emission source or control equipment shall:

1. Maintain and operate the equipment or control equipment at all times in a manner consistent with good practice for minimizing emissions.
2. Remedy any cause of excess emissions in an expeditious manner.
3. Minimize the amount and duration of any excess emission to the maximum extent possible during periods of such emissions. These measures may include but not be limited to the use of clean fuels, production cutbacks, or the use of alternate process units or, in the case of utilities, purchase of electrical power until repairs are completed.
4. Schedule, at a minimum, routine maintenance of equipment or control equipment during periods of process shutdowns to the maximum extent possible. *567 IAC 24.2(1)*

G10. Recordkeeping Requirements for Compliance Monitoring

1. In addition to any source specific recordkeeping requirements contained in this permit, the permittee shall maintain the following compliance monitoring records, where applicable:
 - a. The date, place and time of sampling or measurements
 - b. The date the analyses were performed.
 - c. The company or entity that performed the analyses.
 - d. The analytical techniques or methods used.
 - e. The results of such analyses; and
 - f. The operating conditions as existing at the time of sampling or measurement.
 - g. The records of quality assurance for continuous compliance monitoring systems (including but not limited to quality control activities, audits and calibration drifts.)
2. The permittee shall retain records of all required compliance monitoring data and support information for a period of at least 5 years from the date of compliance monitoring sample, measurement report or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous compliance monitoring, and copies of all reports required by the permit.
3. For any source which in its application identified reasonably anticipated alternative operating scenarios, the permittee shall:
 - a. Comply with all terms and conditions of this permit specific to each alternative scenario.

- b. Maintain a log at the permitted facility of the scenario under which it is operating.
- c. Consider the permit shield, if provided in this permit, to extend to all terms and conditions under each operating scenario. *567 IAC 22.108(4), 567 IAC 22.108(12)*

G11. Evidence used in establishing that a violation has or is occurring.

Notwithstanding any other provisions of these rules, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any provisions herein.

1. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at a source:
 - a. A monitoring method approved for the source and incorporated in an operating permit pursuant to 567 Chapter 22;
 - b. Compliance test methods specified in 567 Chapter 25; or
 - c. Testing or monitoring methods approved for the source in a construction permit issued pursuant to 567 Chapter 22.
2. The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:
 - a. Any monitoring or testing methods provided in these rules; or
 - b. Other testing, monitoring, or information gathering methods that produce information comparable to that produced by any method in subrule 21.5(1) or this subrule. *567 IAC 21.5(1)-567 IAC 21.5(2)*

G12. Prevention of Accidental Release: Risk Management Plan Notification and Compliance Certification

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Act, the permittee shall notify the department of this requirement. The plan shall be filed with all appropriate authorities by the deadline specified by EPA. A certification that this risk management plan is being properly implemented shall be included in the annual compliance certification of this permit. *567 IAC 22.108(6)*

G13. Hazardous Release

The permittee must report any situation involving the actual, imminent, or probable release of a hazardous substance into the atmosphere which, because of the quantity, strength and toxicity of the substance, creates an immediate or potential danger to the public health, safety or to the environment. A verbal report shall be made to the department at (515) 281-8694 and to the local police department or the office of the sheriff of the affected county as soon as possible but not later than six hours after the discovery or onset of the condition. This verbal report must be followed up with a written report as indicated in *567 IAC 131.2(2)*. *567 IAC Chapter 131-State Only*

G14. Excess Emissions and Excess Emissions Reporting Requirements

1. Excess Emissions. Excess emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if the startup, shutdown or cleaning is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Cleaning of control equipment which does not require the shutdown of the process equipment shall be limited to one six-minute period per one-hour period. An incident of excess emission (other than an incident during startup, shutdown or cleaning of control equipment) is a violation. If the owner or operator of a source maintains that the incident of excess emission was due to a malfunction, the owner or operator must show that the conditions which caused the incident of excess emission were not preventable by reasonable maintenance and control measures. Determination of any subsequent enforcement action will be made following review of this report. If excess emissions are occurring, either the control equipment causing the excess emission shall be repaired in an expeditious manner or the process generating the emissions shall be shutdown within a reasonable period of time. An expeditious manner is the time necessary to

determine the cause of the excess emissions and to correct it within a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process equipment or control equipment. In the case of an electric utility, a reasonable period of time is eight hours plus the period of time until comparable generating capacity is available to meet consumer demand with the affected unit out of service, unless, the director shall, upon investigation, reasonably determine that continued operation constitutes an unjustifiable environmental hazard and issue an order that such operation is not in the public interest and require a process shutdown to commence immediately.

2. Excess Emissions Reporting

a. Oral Reporting of Excess Emissions. An incident of excess emission (other than an incident of excess emission during a period of startup, shutdown, or cleaning) shall be reported to the appropriate field office of the department within eight hours of, or at the start of the first working day following the onset of the incident. The reporting exemption for an incident of excess emission during startup, shutdown or cleaning does not relieve the owner or operator of a source with continuous monitoring equipment of the obligation of submitting reports required in 567-subrule 25.1(6). An oral report of excess emission is not required for a source with operational continuous monitoring equipment (as specified in 567-subrule 25.1(1)) if the incident of excess emission continues for less than 30 minutes and does not exceed the applicable visible emission standard by more than 10 percent opacity. The oral report may be made in person or by telephone and shall include as a minimum the following:

- i. The identity of the equipment or source operation from which the excess emission originated and the associated stack or emission point.
- ii. The estimated quantity of the excess emission.
- iii. The time and expected duration of the excess emission.
- iv. The cause of the excess emission.
- v. The steps being taken to remedy the excess emission.
- vi. The steps being taken to limit the excess emission in the interim period.

b. Written Reporting of Excess Emissions. A written report of an incident of excess emission shall be submitted as a follow-up to all required oral reports to the department within seven days of the onset of the upset condition, and shall include as a minimum the following:

- i. The identity of the equipment or source operation point from which the excess emission originated and the associated stack or emission point.
- ii. The estimated quantity of the excess emission.
- iii. The time and duration of the excess emission.
- iv. The cause of the excess emission.
- v. The steps that were taken to remedy and to prevent the recurrence of the incident of excess emission.
- vi. The steps that were taken to limit the excess emission.
- vii. If the owner claims that the excess emission was due to malfunction, documentation to support this claim. 567 IAC 24.1(1)-567 IAC 24.1(4)

3. Emergency Defense for Excess Emissions. For the purposes of this permit, an “emergency” means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include non-compliance, to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation or operator error. An

emergency constitutes an affirmative defense to an action brought for non-compliance with technology based limitations if it can be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that:

- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
- b. The facility at the time was being properly operated;
- c. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements of the permit; and
- d. The permittee submitted notice of the emergency to the director by certified mail within two working days of the time when the emissions limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. *567 IAC 22.108(16)*

G15. Permit Deviation Reporting Requirements

A deviation is any failure to meet a term, condition or applicable requirement in the permit. Reporting requirements for deviations that result in a hazardous release or excess emissions have been indicated above (see G13 and G14). Unless more frequent deviation reporting is specified in the permit, any other deviation shall be documented in the semi-annual monitoring report and the annual compliance certification (see G4 and G5). *567 IAC 22.108(5)"b"*

G16. Notification Requirements for Sources That Become Subject to NSPS and NESHAP Regulations

During the term of this permit, the permittee must notify the department of any source that becomes subject to a standard or other requirement under 567-subrule 23.1(2) (standards of performance of new stationary sources) or section 111 of the Act; or 567-subrule 23.1(3) (emissions standards for hazardous air pollutants), 567-subrule 23.1(4) (emission standards for hazardous air pollutants for source categories) or section 112 of the Act. This notification shall be submitted in writing to the department pursuant to the notification requirements in 40 CFR Section 60.7, 40 CFR Section 61.07, and/or 40 CFR Section 63.9. *567 IAC 23.1(2), 567 IAC 23.1(3), 567 IAC 23.1(4)*

G17. Requirements for Making Changes to Emission Sources That Do Not Require Title V Permit Modification

1. Off Permit Changes to a Source. Pursuant to section 502(b)(10) of the CAAA, the permittee may make changes to this installation/facility without revising this permit if:
 - a. The changes are not major modifications under any provision of any program required by section 110 of the Act, modifications under section 111 of the act, modifications under section 112 of the act, or major modifications as defined in 567 IAC Chapter 22.
 - b. The changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions);
 - c. The changes are not modifications under any provisions of Title I of the Act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or as total emissions);
 - d. The changes are not subject to any requirement under Title IV of the Act.
 - e. The changes comply with all applicable requirements.
 - f. For such a change, the permitted source provides to the department and the administrator by certified mail, at least 30 days in advance of the proposed change, a written notification, including the following, which must be attached to the permit by the source, the department and the administrator:
 - i. A brief description of the change within the permitted facility,
 - ii. The date on which the change will occur,

- iii. Any change in emission as a result of that change,
 - iv. The pollutants emitted subject to the emissions trade
 - v. If the emissions trading provisions of the state implementation plan are invoked, then Title V permit requirements with which the source shall comply; a description of how the emissions increases and decreases will comply with the terms and conditions of the Title V permit.
 - vi. A description of the trading of emissions increases and decreases for the purpose of complying with a federally enforceable emissions cap as specified in and in compliance with the Title V permit; and
 - vii. Any permit term or condition no longer applicable as a result of the change.
- 567 IAC 22.110(1)*

2. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements. *567 IAC 22.110(2)*

3. Notwithstanding any other part of this rule, the director may, upon review of a notice, require a stationary source to apply for a Title V permit if the change does not meet the requirements of subrule 22.110(1). *567 IAC 22.110(3)*

4. The permit shield provided in subrule 22.108(18) shall not apply to any change made pursuant to this rule. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the state implementation plan authorizing the emissions trade. *567 IAC 22.110(4)*

5. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes, for changes that are provided for in this permit. *567 IAC 22.108(11)*

G18. Duty to Modify a Title V Permit

1. Administrative Amendment.

a. An administrative permit amendment is a permit revision that is required to do any of the following:

- i. Correct typographical errors
- ii. Identify a change in the name, address, or telephone number of any person identified in the permit, or provides a similar minor administrative change at the source;
- iii. Require more frequent monitoring or reporting by the permittee; or
- iv. Allow for a change in ownership or operational control of a source where the director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittee has been submitted to the director.

b. The permittee may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request. The request shall be submitted to the director.

c. Administrative amendments to portions of permits containing provisions pursuant to Title IV of the Act shall be governed by regulations promulgated by the administrator under Title IV of the Act.

2. Minor Permit Modification.

a. Minor permit modification procedures may be used only for those permit modifications that do any of the following:

- i. Do not violate any applicable requirements
 - ii. Do not involve significant changes to existing monitoring, reporting or recordkeeping requirements in the Title V permit.
 - iii. Do not require or change a case by case determination of an emission limitation or other standard, or increment analysis.
 - iv. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed in order to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include any federally enforceable emissions caps which the source would assume to avoid classification as a modification under any provision under Title I of the Act; and an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Act.;
 - v. Are not modifications under any provision of Title I of the Act; and
 - vi. Are not required to be processed as significant modification.
- b. An application for minor permit revision shall be on the minor Title V modification application form and shall include at least the following:
- i. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs.
 - ii. The permittee's suggested draft permit
 - iii. Certification by a responsible official, pursuant to 567 IAC 22.107(4), that the proposed modification meets the criteria for use of a minor permit modification procedures and a request that such procedures be used; and
 - iv. Completed forms to enable the department to notify the administrator and the affected states as required by 567 IAC 22.107(7).
- c. The permittee may make the change proposed in its minor permit modification application immediately after it files the application. After the permittee makes this change and until the director takes any of the actions specified in 567 IAC 22.112(4) "a" to "c", the permittee must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time, the permittee need not comply with the existing permit terms and conditions it seeks to modify. However, if the permittee fails to comply with its proposed permit terms and conditions during this time period, existing permit term terms and conditions it seeks to modify may subject the facility to enforcement action.
3. Significant Permit Modification. Significant Title V modification procedures shall be used for applications requesting Title V permit modifications that do not qualify as minor Title V modifications or as administrative amendments. These include but are not limited to all significant changes in monitoring permit terms, every relaxation of reporting or recordkeeping permit terms, and any change in the method of measuring compliance with existing requirements. Significant Title V modifications shall meet all requirements of 567 IAC Chapter 22, including those for applications, public participation, review by affected states, and review by the administrator, and those requirements that apply to Title V issuance and renewal. 567 IAC 22.111-567 IAC 22.113 The permittee shall submit an application for a significant permit modification not later than three months after commencing operation of the changed source unless the existing Title V permit would prohibit such construction or change in operation, in which event the operation of the changed source may not commence until the department revises the permit. 567 IAC 22.105(1)"a"(4)

G19. Duty to Obtain Construction Permits

Unless exempted under 567 IAC 22.1(2), the permittee must not construct, install, reconstruct, or alter any equipment, control equipment or anaerobic lagoon without first obtaining a construction permit, conditional permit, or permit pursuant to 567 IAC 22.8, or permits required pursuant to 567 IAC 22.4 and 567 IAC 22.5. Such permits shall be obtained prior to the initiation of construction, installation or alteration of any portion of the stationary source. 567 IAC 22.1(1)

G20. Asbestos

The permittee shall comply with 567 IAC 23.1(3)"a", and 567 IAC 23.2(3)"g" when conducting any renovation or demolition activities at the facility. 567 IAC 23.1(3)"a", and 567 IAC 23.2

G21. Open Burning

The permittee is prohibited from conducting open burning, except as may be allowed by 567 IAC 23.2. 567 IAC 23.2 *except* 23.2(3)"h"; 567 IAC 23.2(3)"h" - *State Only*

G22. Acid Rain (Title IV) Emissions Allowances

The permittee shall not exceed any allowances that it holds under Title IV of the Act or the regulations promulgated there under. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners and operators of the unit or the designated representative of the owners and operators is prohibited. Exceedences of applicable emission rates are prohibited. "Held" in this context refers to both those allowances assigned to the owners and operators by USEPA, and those allowances supplementally acquired by the owners and operators. The use of any allowance prior to the year for which it was allocated is prohibited. Contravention of any other provision of the permit is prohibited. 567 IAC 22.108(7)

G23. Stratospheric Ozone and Climate Protection (Title VI) Requirements

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:

- a. All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to § 82.106.
- b. The placement of the required warning statement must comply with the requirements pursuant to § 82.108.
- c. The form of the label bearing the required warning statement must comply with the requirements pursuant to § 82.110.
- d. No person may modify, remove, or interfere with the required warning statement except as described in § 82.112.

2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:

- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156.
- b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158.
- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161.
- d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with reporting and recordkeeping requirements pursuant to § 82.166. ("MVAC-like appliance" as defined at § 82.152)
- e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to § 82.156.

- b. f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.
- 3. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.
- 4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant,
- 5. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *40 CFR part 82*

G24. Permit Reopenings

- 1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. *567 IAC 22.108(9)"c"*
- 2. Additional applicable requirements under the Act become applicable to a major part 70 source with a remaining permit term of 3 or more years. Revisions shall be made as expeditiously as practicable, but not later than 18 months after the promulgation of such standards and regulations.
 - a. Reopening and revision on this ground is not required if the permit has a remaining term of less than three years;
 - b. Reopening and revision on this ground is not required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii) as amended to June 25, 1993.
 - c. Reopening and revision on this ground is not required if the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. *567 IAC 22.108(17)"a"*, *567 IAC 22.108(17)"b"*
- 3. A permit shall be reopened and revised under any of the following circumstances:
 - a. The department receives notice that the administrator has granted a petition for disapproval of a permit pursuant to 40 CFR 70.8(d) as amended to June 25, 1993, provided that the reopening may be stayed pending judicial review of that determination;
 - b. The department or the administrator determines that the Title V permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Title V permit;
 - c. Additional applicable requirements under the Act become applicable to a Title V source, provided that the reopening on this ground is not required if the permit has a remaining term of less than three years, the effective date of the requirement is later than the date on which the permit is due to expire, or the additional applicable requirements are implemented in a general permit that is applicable to the source and the source

receives approval for coverage under that general permit. Such a reopening shall be complete not later than 18 months after promulgation of the applicable requirement.

d. Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the acid rain program. Upon approval by the administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.

e. The department or the administrator determines that the permit must be revised or revoked to ensure compliance by the source with the applicable requirements. *567 IAC 22.114(1)*

4. Proceedings to reopen and reissue a Title V permit shall follow the procedures applicable to initial permit issuance and shall effect only those parts of the permit for which cause to reopen exists. *567 IAC 22.114(2)*

G25. Permit Shield

1. The director may expressly include in a Title V permit a provision stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:

a. Such applicable requirements are included and are specifically identified in the permit; or

b. The director, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.

2. A Title V permit that does not expressly state that a permit shield exists shall be presumed not to provide such a shield.

3. A permit shield shall not alter or affect the following:

a. The provisions of Section 303 of the Act (emergency orders), including the authority of the administrator under that section;

b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act;

d. The ability of the department or the administrator to obtain information from the facility pursuant to Section 114 of the Act. *567 IAC 22.108 (18)*

G26. Severability

The provisions of this permit are severable and if any provision or application of any provision is found to be invalid by this department or a court of law, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected by such finding. *567 IAC 22.108 (8)*

G27. Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege. *567 IAC 22.108 (9)"d"*

G28. Transferability

This permit is not transferable from one source to another. If title to the facility or any part of it is transferred, an administrative amendment to the permit must be sought to determine transferability of the permit. *567 IAC 22.111 (1)"d"*

G29. Disclaimer

No review has been undertaken on the engineering aspects of the equipment or control equipment other than the potential of that equipment for reducing air contaminant emissions. *567 IAC 22.3(3)"c"*

G30. Notification and Reporting Requirements for Stack Tests or Monitor Certification

The permittee shall notify the department's stack test contact in writing not less than 30 days before a required test or performance evaluation of a continuous emission monitor is performed to determine compliance with an applicable requirement. For the department to consider test results a valid demonstration of compliance with applicable rules or a permit condition, such notice shall be given. Such notice shall include the time, the place, the name of the person who will conduct the test and other information as required by the department. Unless specifically waived by the department's stack test contact, a pretest meeting shall be held not later than 15 days prior to conducting the compliance demonstration. The department may accept a testing protocol in lieu of a pretest meeting. A representative of the department shall be permitted to witness the tests. Results of the tests shall be submitted in writing to the department's stack test contact in the form of a comprehensive report within six weeks of the completion of the testing. Compliance tests conducted pursuant to this permit shall be conducted with the source operating in a normal manner at its maximum continuous output as rated by the equipment manufacturer, or the rate specified by the owner as the maximum production rate at which the source shall be operated. In cases where compliance is to be demonstrated at less than the maximum continuous output as rated by the equipment manufacturer, and it is the owner's intent to limit the capacity to that rating, the owner may submit evidence to the department that the source has been physically altered so that capacity cannot be exceeded, or the department may require additional testing, continuous monitoring, reports of operating levels, or any other information deemed necessary by the department to determine whether such source is in compliance.

Stack test notifications, reports and correspondence shall be sent to:

Stack Test Review Coordinator
Iowa DNR, Air Quality Bureau
7900 Hickman Road, Suite #1
Urbandale, IA 50322
(515) 242-6001

Within Polk and Linn Counties, stack test notifications, reports and correspondence shall also be directed to the supervisor of the respective county air pollution program.

567 IAC 25.1(7)"a", 567 IAC 25.1(9)

G31. Prevention of Air Pollution Emergency Episodes

The permittee shall comply with the provisions of 567 IAC Chapter 26 in the prevention of excessive build-up of air contaminants during air pollution episodes, thereby preventing the occurrence of an emergency due to the effects of these contaminants on the health of persons.

567 IAC 26.1(1)

G32. Contacts List

The current address and phone number for reports and notifications to the EPA administrator is:

Chief of Air Permits
EPA Region 7
Air Permits and Compliance Branch
901 N. 5th Street
Kansas City, KS 66101
(913) 551-7020

The current address and phone number for reports and notifications to the department or the Director is:

Chief, Air Quality Bureau
Iowa Department of Natural Resources
7900 Hickman Road, Suite #1
Urbandale, IA 50322
(515) 242-5100

Reports or notifications to the DNR Field Offices or local programs shall be directed to the supervisor at the appropriate field office or local program. Current addresses and phone numbers are:

Field Office 1

909 West Main – Suite 4
Manchester, IA 52057
(563) 927-2640

Field Office 2

P.O. Box 1443
2300-15th St., SW
Mason City, IA 50401
(641) 424-4073

Field Office 3

1900 N. Grand Ave.
Spencer, IA 51301
(712) 262-4177

Field Office 4

1401 Sunnyside Lane
Atlantic, IA 50022
(712) 243-1934

Field Office 5

401 SW 7th Street, Suite I
Des Moines, IA 50309
(515) 725-0268

Field Office 6

1023 West Madison Street
Washington, IA 52353-1623
(319) 653-2135

Polk County Planning & Development

Air Quality Division
5885 NE 14th St.
Des Moines, IA 50313
(515) 286-3351

Linn County Public Health Dept.

Air Pollution Control Division
501 13th St., NW
Cedar Rapids, IA 52405
(319) 892-6000

V. Appendix A: 40 CFR 63, Subpart MMM, paragraphs 63.1365(c)(2) and (3), and 63.1366(b)(2) and (3)

63.1365(c)

(2) *Uncontrolled emissions.* The owner or operator referred to from paragraphs (c)(1)(i) through (v) of this section shall calculate uncontrolled emissions according to the procedures described in paragraph (c)(2)(i) or (ii) of this section, as appropriate.

(i) *Emission estimation procedures.* The owner or operator shall determine uncontrolled HAP emissions using emission measurements and/or calculations for each batch emission episode according to the engineering evaluation methodology in paragraphs (c)(2)(i)(A) through (H) of this section.

(A) Individual HAP partial pressures in multicomponent systems shall be determined in accordance with the methods specified in paragraphs (c)(2)(i)(A)(1) through (3) of this section. Chemical property data may be obtained from standard references.

(1) If the components are miscible in one another, use Raoult's law to calculate the partial pressures;

(2) If the solution is a dilute aqueous mixture, use Henry's law constants to calculate partial pressures;

(3) If Raoult's law or Henry's law are not appropriate or available, use any of the methods specified in paragraphs (c)(2)(i)(A)(3)(i) through (iii) of this section.

(i) Use experimentally obtained activity coefficients;

(ii) Use models such as the group-contribution models to predict activity coefficients;

(iii) Assume the components of the system behave independently and use the summation of all vapor pressures from the HAP as the total HAP partial pressure;

(B) *Charging or filling.* Emissions from vapor displacement due to transfer of material to a vessel shall be calculated using Equation 9 of this subpart:

$$E = \frac{(V)}{(R)(T)} \times \sum_{i=1}^n (P_i)(MW_i) \quad (\text{Eq. 9})$$

Where:

E = mass of HAP emitted

P_i = partial pressure of the individual HAP

V = volume of gas displaced from the vessel

R = ideal gas law constant

T = temperature of the vessel vapor space; absolute

MW_i = molecular weight of the individual HAP

(C) *Purging.* Emissions from purging shall be calculated using Equation 10 of this subpart, except that for purge flow rates greater than 100 scfm, the mole fraction of HAP will be assumed to be 25 percent of the saturated value.

$$E = \sum_{i=1}^n P_i MW_i \times \left(\frac{(V)(t)}{(R)(T)} \right) \times \frac{P_T}{P_T - \sum_{j=1}^m (P_j)} \quad (\text{Eq. 10})$$

Where:

E = mass of HAP emitted

V = purge flow rate at the temperature and pressure of the vessel vapor space

R = ideal gas law constant

T = temperature of the vessel vapor space; absolute

P_i = partial pressure of the individual HAP

P_j = partial pressure of individual condensable compounds (including HAP)

P_T = pressure of the vessel vapor space

MW_i = molecular weight of the individual HAP

t = time of purge

n = number of HAP compounds in the emission stream

m = number of condensable compounds (including HAP) in the emission stream.

(D) *Heating*. Emissions caused by heating the contents of a vessel to a temperature less than the boiling point shall be calculated using the procedures in either paragraph (c)(2)(i)(D)(1), (2), or (4) of this section, as appropriate. If the contents of a vessel are heated to the boiling point, emissions while boiling are assumed to be zero if the owner or operator is complying with the provisions in paragraph (d)(2)(i)(C)(3) of this section.

(1) If the final temperature to which the vessel contents are heated is lower than 50 K below the boiling point of the HAP in the vessel, then emissions shall be calculated using Equations 11 through 14 of this subpart.

(i) The mass of HAP emitted per episode shall be calculated using Equation 11 of this subpart:

$$E = \frac{\sum_{i=1}^n \frac{(P_i)_{T1}}{Pa_1} + \sum_{i=1}^n \frac{(P_i)_{T2}}{Pa_2}}{2} \times \Delta n \times MW_{HAP} \quad (Eq. 11)$$

Where:

E = mass of HAP vapor displaced from the vessel being heated

(Pi)Tn = partial pressure of each HAP in the vessel headspace at initial (n = 1) and final (n = 2) temperatures

Pa1 = initial noncondensable gas pressure in the vessel, as calculated using Equation 13 of this subpart

Pa2 = final noncondensable gas pressure in the vessel, as calculated using Equation 13 of this subpart

Δn = number of moles of noncondensable gas displaced, as calculated using Equation 12 of this subpart

MWHAP = The average molecular weight of HAP present in the vessel, as calculated using Equation 14 of this subpart:

n = number of HAP compounds in the displaced vapor

(ii) The moles of noncondensable gas displaced shall be calculated using Equation 12 of this subpart:

$$\Delta n = \frac{V}{R} \left[\left(\frac{Pa_1}{T_1} \right) - \left(\frac{Pa_2}{T_2} \right) \right] \quad (Eq. 12)$$

where:

Δn = number of moles of noncondensable gas displaced

V = volume of free space in the vessel

R = ideal gas law constant

Pa1 = initial noncondensable gas pressure in the vessel, as calculated using Equation 13 of this subpart

Pa2 = final noncondensable gas pressure in the vessel, as calculated using Equation 13 of this subpart

T1 = initial temperature of vessel contents, absolute

T2 = final temperature of vessel contents, absolute

(iii) The initial and final pressure of the noncondensable gas in the vessel shall be calculated according to Equation 13 of this subpart:

$$Pa_n = Pa_{atm} - \sum_{j=1}^m (P_j)_{Tn} \quad (\text{Eq. 13})$$

Where:

Pan = partial pressure of noncondensable gas in the vessel headspace at initial (n = 1) and final (n = 2) temperatures

Patm = atmospheric pressure

(Pj)Tn = partial pressure of each condensable volatile organic compound (including HAP) in the vessel headspace at the initial temperature (n = 1) and final (n = 2) temperature

(iv) The average molecular weight of HAP in the displaced gas shall be calculated using Equation 14 of this subpart:

$$MW_{HAP} = \frac{\sum_{i=1}^n \left[(P_i)_{T_1} + (P_i)_{T_2} \right] MW_i}{\sum_{i=1}^n \left[(P_i)_{T_1} + (P_i)_{T_2} \right]} \quad (\text{Eq. 14})$$

Where:

MWHAP = average molecular weight of HAP in the displaced gas

(Pi)Tn = partial pressure of each HAP in the vessel headspace at the initial (T1) and final (T2) temperatures

MWi = molecular weight of each HAP

n = number of HAP compounds in the emission stream

(2) If the vessel contents are heated to a temperature greater than 50 K below the boiling point, then emissions from the heating of a vessel shall be calculated as the sum of the emissions calculated in accordance with paragraphs (c)(2)(i)(D)(2)(i) and (ii) of this section.

(i) For the interval from the initial temperature to the temperature 50 K below the boiling point, emissions shall be calculated using Equation 11 of this subpart, where T2 is the temperature 50 K below the boiling point.

(ii) For the interval from the temperature 50 K below the boiling point to the final temperature, emissions shall be calculated as the summation of emissions for each 5 K increment, where the emission for each increment shall be calculated using Equation 11 of this subpart. If the final temperature of the heatup is lower than 5 K below the boiling point, the final temperature for the last increment shall be the final temperature of the heatup, even if the last increment is less than 5 K. If the final temperature of the heatup is higher than 5 K below the boiling point, the final temperature for the last increment shall be the temperature 5 K below the boiling point, even if the last increment is less than 5 K.

(3) While boiling, the vessel must be operated with a properly operated process condenser. An initial demonstration that a process condenser is properly operated is required for vessels that operate process condensers without secondary condensers that are air pollution control devices. The owner or operator must either measure the condenser exhaust gas temperature and show it is less than the boiling point of the substance(s) in the vessel, or perform a material balance around the vessel and condenser to show that at least 99 percent of the material vaporized while boiling is condensed. Uncontrolled emissions are assumed to be zero under these conditions. The initial demonstration shall be conducted for all appropriate operating scenarios and documented in the Notification of Compliance Status report as specified in § 63.1368(f).

(4)

(i) As an alternative to the procedures described in paragraphs (c)(2)(i)(D)(1) and (2) of this section, emissions caused by heating a vessel to any temperature less than the boiling point may be calculated using Equation 15 of this subpart.

$$E = MW_{HAP} \times \left(N_{avg} \times \ln \left(\frac{P_T - \sum_{i=1}^n (P_{i,1})}{P_T - \sum_{i=1}^n (P_{i,2})} \right) - (n_{HAP,2} - n_{HAP,1}) \right) \quad (Eq. 15)$$

Where:

E = mass of HAP vapor displaced from the vessel being heated

Navg = average gas space molar volume during the heating process, as calculated using Equation 16 of this subpart

PT = total pressure in the vessel

Pi,1 = partial pressure of the individual HAP compounds at T1

Pi,2 = partial pressure of the individual HAP compounds at T2

MWHAP = average molecular weight of the HAP compounds, as calculated using Equation 14 of this subpart

nHAP,1 = number of moles of total HAP in the vessel headspace at T1

nHAP,2 = number of moles of total HAP in the vessel headspace at T2

m = number of HAP compounds in the emission stream.

(ii) The average gas space molar volume during the heating process is calculated using Equation 16 of this subpart.

$$N_{avg} = \frac{VP_T}{2R} \left(\frac{1}{T_1} + \frac{1}{T_2} \right) \quad (Eq. 16)$$

Where:

Navg = average gas space molar volume during the heating process

V = volume of free space in vessel

PT = total pressure in the vessel

R = ideal gas law constant

T1 = initial temperature of the vessel contents, absolute

T2 = final temperature of the vessel contents, absolute

(iii) The difference in the number of moles of total HAP in the vessel headspace between the initial and final temperatures is calculated using Equation 17 of this subpart.

$$(n_{HAP,2} - n_{HAP,1}) = \frac{V}{(R)(T_2)} \sum_{i=1}^n P_{i,2} - \frac{V}{(R)(T_1)} \sum_{i=1}^n P_{i,1} \quad (Eq. 17)$$

Where:

nHAP,2 = number of moles of total HAP in the vessel headspace at T2

nHAP,1 = number of moles of total HAP in the vessel headspace at T1

V = volume of free space in vessel

R = ideal gas law constant

T1 = initial temperature of the vessel contents, absolute

T2 = final temperature of the vessel contents, absolute

Pi,1 = partial pressure of the individual HAP compounds at T1

Pi,2 = partial pressure of the individual HAP compounds at T2

n = number of HAP compounds in the emission stream.

(E) *Depressurization*. Emissions from depressurization shall be calculated using the procedures in paragraphs (c)(2)(i)(E)(I) through (5) of this section. Alternatively, the owner or operator may elect to calculate emissions from depressurization using the procedures in paragraph (c)(2)(i)(E)(6) of this section.

(I) The moles of HAP vapor initially in the vessel are calculated using Equation 18 of this subpart:

$$n_{HAP} = \frac{V}{R T} \times \sum_{i=1}^n (P_i) \quad (\text{Eq. 18})$$

Where:

nHAP=moles of HAP vapor in the vessel

Pi=partial pressure of each HAP in the vessel vapor space

V=free volume in the vessel being depressurized

R=ideal gas law constant

T=absolute temperature in vessel

n=number of HAP compounds in the emission stream

(2) The initial and final moles of noncondensable gas present in the vessel are calculated using Equations 19 and 20 of this subpart:

$$n_1 = \frac{V P_{nc1}}{R T} \quad (\text{Eq. 19})$$

$$n_2 = \frac{V P_{nc2}}{R T} \quad (\text{Eq. 20})$$

Where:

n1=initial number of moles of noncondensable gas in the vessel

n2=final number of moles of noncondensable gas in the vessel

V=free volume in the vessel being depressurized

Pnc1=initial partial pressure of the noncondensable gas, as calculated using Equation 21 of this subpart

Pnc2=final partial pressure of the noncondensable gas, as calculated using Equation 22 of this subpart

R=ideal gas law constant

T=temperature, absolute

(3) The initial and final partial pressures of the noncondensable gas in the vessel are determined using Equations 21 and 22 of this subpart.

$$P_{nc1} = P_1 - \sum_{j=1}^m (P_j^*) (x_j) \quad (\text{Eq. 21})$$

$$P_{nc2} = P_2 - \sum_{j=1}^m (P_j^*) (x_j) \quad (\text{Eq. 22})$$

Where:

Pnc1 = initial partial pressure of the noncondensable gas

Pnc2 = final partial pressure of the noncondensable gas

P1 = initial vessel pressure

P2 = final vessel pressure

Pj* = vapor pressure of each condensable compound (including HAP) in the emission stream

xj = mole fraction of each condensable compound (including HAP) in the liquid phase

m = number of condensable compounds (including HAP) in the emission stream.

(4) The moles of HAP emitted during the depressurization are calculated by taking an approximation of the average ratio of moles of HAP to moles of noncondensable and multiplying by the total moles of noncondensables released during the depressurization, using Equation 23 of this subpart:

$$n_{HAP,e} = \left[\frac{\frac{n_{HAP,1}}{n_1} + \frac{n_{HAP,2}}{n_2}}{2} \right] [n_1 - n_2] \quad (Eq. 23)$$

Where:

$n_{HAP,e}$ = moles of HAP emitted

$n_{HAP,1}$ = moles of HAP vapor in vessel at the initial pressure, as calculated using Equation 18 of this subpart

$n_{HAP,2}$ = moles of HAP vapor in vessel at the final pressure, as calculated using Equation 18 of this subpart

n_1 = initial number of moles of noncondensable gas in the vessel, as calculated using Equation 19 of this subpart

n_2 = final number of moles of noncondensable gas in the vessel, as calculated using Equation 19 of this subpart.

(5) Use Equation 24 of this subpart to calculate the mass of HAP emitted:

$$E = n_{HAP,e} * MW_{HAP} \quad (Eq. 24)$$

Where:

E = mass of HAP emitted

$n_{HAP,e}$ = moles of HAP emitted, as calculated using Equation 23 of this subpart

MW_{HAP} = average molecular weight of the HAP as calculated using Equation 14 of this subpart

(6) As an alternative to the procedures in paragraphs (c)(2)(i)(E)(1) through (5) of this section, emissions from depressurization may be calculated using Equation 25 of this subpart:

$$E = \frac{V}{(R)(T)} \times \ln \left(\frac{P_1 - \sum_{j=1}^m (P_j)}{P_2 - \sum_{j=1}^m (P_j)} \right) \times \sum_{i=1}^n (P_i) (MW_i) \quad (Eq. 25)$$

where:

V = free volume in vessel being depressurized

R = ideal gas law constant

T = temperature of the vessel, absolute

P_1 = initial pressure in the vessel

P_2 = final pressure in the vessel

P_i = partial pressure of the individual HAP compounds

P_j = partial pressure of individual condensable VOC compounds (including HAP)

MW_i = molecular weight of the individual HAP compounds

n = number of HAP compounds in the emission stream

m = number of condensable VOC compounds (including HAP) in the emission stream

(F) *Vacuum systems*. Calculate emissions from vacuum systems using Equation 26 of this subpart:

$$E = \frac{(MW_{HAP})(La)(t)}{MW_{nc}} \left(\frac{\sum_{i=1}^n P_i}{P_T - \sum_{j=1}^m P_j} \right) \quad (Eq. 26)$$

Where:

E = mass of HAP emitted

PT = absolute pressure of receiving vessel or ejector outlet conditions, if there is no receiver

Pi = partial pressure of individual HAP at the receiver temperature or the ejector outlet conditions

Pj = partial pressure of individual condensable compounds (including HAP) at the receiver temperature or the ejector outlet conditions

La = total air leak rate in the system, mass/time

MWnc = molecular weight of noncondensable gas

t = time of vacuum operation

MWHAP = average molecular weight of HAP in the emission stream, as calculated using Equation 14 of this subpart, with HAP partial pressures calculated at the temperature of the receiver or ejector outlet, as appropriate

n = number of HAP components in the emission stream

m = number of condensable compounds (including HAP) in the emission stream.

(G) *Gas evolution*. Emissions from gas evolution shall be calculated using Equation 10 of this subpart with V calculated using Equation 27 of this subpart:

$$V = \frac{(W_g)(R)(T)}{(P_T)(MW_g)} \quad (Eq. 27)$$

Where:

V=volumetric flow rate of gas evolution

Wg=mass flow rate of gas evolution

R=ideal gas law constant

T=temperature at the exit, absolute

PT=vessel pressure

MWg=molecular weight of the evolved gas

(H) *Air drying*. Use Equation 28 of this subpart to calculate emissions from air drying:

$$E = B \times \left(\frac{PS_1}{100 - PS_1} - \frac{PS_2}{100 - PS_2} \right) \quad (Eq. 28)$$

Where:

E=mass of HAP emitted

B=mass of dry solids

PS1=HAP in material entering dryer, weight percent

PS2=HAP in material exiting dryer, weight percent.

(ii) *Engineering assessments*. The owner or operator shall conduct an engineering assessment to determine uncontrolled HAP emissions for each emission episode that is not due to vapor displacement, purging, heating, depressurization, vacuum systems, gas evolution, or air drying. For a given emission episode caused by any of these seven types of activities, the owner or operator also may request approval to determine uncontrolled HAP emissions based on an engineering assessment. Except as specified in paragraph (c)(2)(ii)(A) of this section, all data, assumptions, and procedures used in the engineering assessment shall be documented in the Precompliance plan in accordance with § 63.1367(b). An engineering assessment includes, but is not limited to, the information and procedures described in paragraphs (c)(2)(ii)(A) through (D) of this section.

- (A) Test results, provided the tests are representative of current operating practices at the process unit. For process vents without variable emission stream characteristics, an engineering assessment based on the results of a previous test may be submitted in the Notification of Compliance Status report instead of the Precompliance plan. Results from a previous test of process vents with variable emission stream characteristics will be acceptable in place of values estimated using the procedures specified in paragraph (c)(2)(i) of this section if the test data show a greater than 20 percent discrepancy between the test value and the estimated value, and the results of the engineering assessment shall be included in the Notification of Compliance Status report. For other process vents with variable emission stream characteristics, engineering assessments based on the results of a previous test must be submitted in the Precompliance plan. For engineering assessments based on new tests, the owner or operator must comply with the test notification requirements in § 63.1368(m), and the results of the engineering assessment may be submitted in the Notification of Compliance Status report rather than the Precompliance plan.
- (B) Bench-scale or pilot-scale test data representative of the process under representative operating conditions.
- (C) Maximum flow rate, HAP emission rate, concentration, or other relevant parameter specified or implied within a permit limit applicable to the process vent.
- (D) Design analysis based on accepted chemical engineering principles, measurable process parameters, or physical or chemical laws or properties. Examples of analytical methods include, but are not limited to:
- (1) Use of material balances based on process stoichiometry to estimate maximum organic HAP concentrations;
 - (2) Estimation of maximum flow rate based on physical equipment design such as pump or blower capacities; and
 - (3) Estimation of HAP concentrations based on saturation conditions.
- (3) *Controlled emissions.* Except for condensers, the owner or operator shall determine controlled emissions using the procedures in either paragraph (c)(3)(i) or (ii) of this section, as applicable. For condensers, controlled emissions shall be calculated using the emission estimation equations described in paragraph (c)(3)(iii) of this section. The owner or operator is not required to calculate controlled emissions from devices described in paragraph (a)(4) of this section or from flares for which compliance is demonstrated in accordance with paragraph (a)(3) of this section. If the owner or operator is complying with an outlet concentration standard and the control device uses supplemental gases, the outlet concentrations shall be corrected in accordance with the procedures described in paragraph (a)(7) of this section.
- (i) *Small control devices, except condensers.* Controlled emissions for each process vent that is controlled using a small control device, except for a condenser, shall be determined by using the design evaluation described in paragraph (c)(3)(i)(A) of this section, or by conducting a performance test in accordance with paragraph (c)(3)(ii) of this section.
- (A) *Design evaluation.* The design evaluation shall include documentation demonstrating that the control device being used achieves the required control efficiency under absolute or hypothetical peak-case conditions, as determined from the emission profile described in paragraph (b)(11)(iii) of this section. The control efficiency determined from this design evaluation shall be applied to uncontrolled emissions to estimate controlled emissions. The documentation must be conducted in accordance with the provisions in paragraph (a)(1) of this section. The design evaluation shall also include the value(s) and basis for the parameter(s) monitored under § 63.1366.
- (B) Whenever a small control device becomes a large control device, the owner or operator must comply with the provisions in paragraph (c)(3)(ii) of this section and submit the test report in the next Periodic report.
- (ii) *Large control devices, except condensers.* Controlled emissions for each process vent that is controlled using a large control device, except for a condenser, shall be determined by applying the control efficiency of the large control device to the estimated uncontrolled emissions. The control efficiency shall be determined by conducting a performance test on the control device as described in paragraphs (c)(3)(ii)(A) through (C) of this section, or by using the results of a previous performance test as described in paragraph (c)(3)(ii)(D) of this section. If the control device is intended to control only HCl and chlorine, the owner or operator may assume the control efficiency of organic HAP is 0 percent. If the control device is intended to control only organic HAP, the owner or operator may assume the control efficiency for HCl and chlorine is 0 percent.
- (A) Performance test measurements shall be conducted at both the inlet and outlet of the control device for TOC, total organic HAP, and total HCl and chlorine, as applicable, using the test methods and

- procedures described in paragraph (b) of this section. Concentrations shall be calculated from the data obtained through emission testing according to the procedures in paragraph (a)(2) of this section.
- (B) Performance testing shall be conducted under absolute or hypothetical peak-case conditions, as defined in paragraphs (b)(11)(i) and (ii) of this section.
- (C) The owner or operator may elect to conduct more than one performance test on the control device for the purpose of establishing more than one operating condition at which the control device achieves the required control efficiency.
- (D) The owner or operator is not required to conduct a performance test for any control device for which a previous performance test was conducted, provided the test was conducted using the same procedures specified in paragraphs (b)(1) through (11) of this section over conditions typical of the absolute or hypothetical peak-case, as defined in paragraphs (b)(11)(i) and (ii) of this section. The results of the previous performance test shall be used to demonstrate compliance.
- (iii) *Condensers.* The owner or operator using a condenser as a control device shall determine controlled emissions for each batch emission episode according to the engineering methodology in paragraphs (c)(3)(iii)(A) through (G) of this section. The owner or operator must establish the maximum outlet gas temperature and calculate the controlled emissions using this temperature in the applicable equation. Individual HAP partial pressures shall be calculated as specified in paragraph (c)(2)(i) of this section.
- (A) Emissions from vapor displacement due to transfer of material to a vessel shall be calculated using Equation 9 of this subpart with T set equal to the temperature of the receiver and the HAP partial pressures determined at the temperature of the receiver.
- (B) Emissions from purging shall be calculated using Equation 10 of this subpart with T set equal to the temperature of the receiver and the HAP partial pressures determined at the temperature of the receiver.
- (C) Emissions from heating shall be calculated using Equation 29 of this subpart. In Equation 29 of this subpart, Δn is equal to the number of moles of noncondensable displaced from the vessel, as calculated using Equation 12 of this subpart. In Equation 29 of this subpart, the HAP average molecular weight shall be calculated using Equation 14 with the HAP partial pressures determined at the temperature of the receiver.

$$E = \Delta n \times \frac{\sum_{i=1}^n P_i}{P_T - \sum_{j=1}^m P_j} \times MW_{HAP} \quad (\text{Eq. 29})$$

Where:

E=mass of HAP emitted

Δn =moles of noncondensable gas displaced

P_T =pressure in the receiver

P_i =partial pressure of the individual HAP at the receiver temperature

P_j =partial pressure of the individual condensable VOC (including HAP) at the receiver temperature

n=number of HAP compounds in the emission stream

MW_{HAP} =the average molecular weight of HAP in vapor exiting the receiver, as calculated using Equation 14 of this subpart

m=number of condensable VOC (including HAP) in the emission stream

(D)

(I) Emissions from depressurization shall be calculated using Equation 30 of this subpart.

$$E = (V_{nc1} - V_{nc2}) \times \frac{\sum_{i=1}^n (P_i)}{P_T - \sum_{j=1}^m (P_j)} \times \frac{P_T}{RT} \times MW_{HAP} \quad (\text{Eq. 30})$$

Where:

E=mass of HAP vapor emitted

Vnc1=initial volume of noncondensable in the vessel, corrected to the final pressure, as calculated using Equation 31 of this subpart

Vnc2=final volume of noncondensable in the vessel, as calculated using Equation 32 of this subpart

Pi=partial pressure of each individual HAP at the receiver temperature

Pj=partial pressure of each condensable VOC (including HAP) at the receiver temperature

PT=receiver pressure

T=temperature of the receiver, absolute

R=ideal gas law constant

MWHAP=the average molecular weight of HAP calculated using Equation 14 of this subpart with partial pressures determined at the receiver temperature

n=number of HAP compounds in the emission stream

m=number of condensable VOC (including HAP) in the emission stream

(2) The initial and final volumes of noncondensable gas present in the vessel, adjusted to the pressure of the receiver, are calculated using Equations 31 and 32 of this subpart.

$$V_{nc1} = \frac{VP_{nc1}}{P_T} \quad (\text{Eq. 31})$$

$$V_{nc2} = \frac{VP_{nc2}}{P_T} \quad (\text{Eq. 32})$$

Where:

Vnc1=initial volume of noncondensable gas in the vessel

Vnc2=final volume of noncondensable gas in the vessel

V=free volume in the vessel being depressurized

Pnc1=initial partial pressure of the noncondensable gas, as calculated using Equation 33 of this subpart

Pnc2=final partial pressure of the noncondensable gas, as calculated using Equation 34 of this subpart

PT=pressure of the receiver

(3) Initial and final partial pressures of the noncondensable gas in the vessel are determined using Equations 33 and 34 of this subpart.

$$P_{nc1} = P_1 - \sum_{j=1}^m P_j \quad (\text{Eq. 33})$$

$$P_{nc2} = P_2 - \sum_{j=1}^m P_j \quad (\text{Eq. 34})$$

Where:

Pnc1=initial partial pressure of the noncondensable gas in the vessel

Pnc2=final partial pressure of the noncondensable gas in the vessel

P1=initial vessel pressure

P2=final vessel pressure

Pj=partial pressure of each condensable VOC (including HAP) in the vessel

m=number of condensable VOC (including HAP) in the emission stream

(E) Emissions from vacuum systems shall be calculated using Equation 26 of this subpart.

(F) Emissions from gas evolution shall be calculated using Equation 8 with V calculated using Equation 27 of this subpart, T set equal to the receiver temperature, and the HAP partial pressures determined at the receiver temperature. The term for time, t, in Equation 10 of this subpart is not needed for the purposes of this calculation.

(G) Emissions from air drying shall be calculated using Equation 9 of this subpart with V equal to the air flow rate and Pi determined at the receiver temperature.

63.1366(b)

(2) Averaging periods. Averaging periods for parametric monitoring levels shall be established according to paragraphs (b)(2)(i) through (iii) of this section.

(i) Except as provided in paragraph (b)(2)(iii) of this section, a daily (24-hour) or block average shall be calculated as the average of all values for a monitored parameter level set according to the procedures in (b)(3)(iii) of this section recorded during the operating day or block.

(ii) The operating day or block shall be defined in the Notification of Compliance Status report. The operating day may be from midnight to midnight or another continuous 24-hour period. The operating block may be used as an averaging period only for vents from batch operations, and is limited to a period of time that is, at a maximum, equal to the time from the beginning to end of a series of consecutive batch operations.

(iii) Monitoring values taken during periods in which the control devices are not controlling HAP from an emission stream subject to the standards in § 63.1362, as indicated by periods of no flow or periods when only streams that are not subject to the standards in § 63.1362 are controlled, shall not be considered in the averages. Where flow to the device could be intermittent, the owner or operator shall install, calibrate and operate a flow indicator at the inlet or outlet of the control device to identify periods of no flow.

(3) Procedures for setting parameter levels for control devices used to control emissions from process vents.

(i) Small control devices. Except as provided in paragraph (b)(1)(i) of this section, for devices controlling less than 10 tons/yr of HAP for which a performance test is not required, the parametric levels shall be set based on the design evaluation required in § 63.1365(c)(3)(i)(A). If a performance test is conducted, the monitoring parameter level shall be established according to the procedures in paragraph (b)(3)(ii) of this section.

(ii) Large control devices. For devices controlling greater than or equal to 10 tons/yr of HAP for which a performance test is required, the parameter level must be established as follows:

(A) If the operating parameter level to be established is a maximum or minimum, it must be based on the average of the average values from each of the three test runs.

(B) The owner or operator may establish the parametric monitoring level(s) based on the performance test supplemented by engineering assessments and/or manufacturer's recommendations. Performance testing is not required to be conducted over the entire range of expected parameter values. The rationale for the specific level for each parameter, including any data and calculations used to develop the level(s) and a description of why the level indicates proper operation of the control device shall be provided in the Precompliance plan. Determination of the parametric monitoring level using these procedures is subject to review and approval by the Administrator.

(iii) Parameter levels for control devices controlling batch process vents. For devices controlling batch process vents alone or in combination with other streams, the level(s) shall be established in accordance with paragraph (b)(3)(iii)(A) or (B) of this section.

(A) A single level for the batch process(es) shall be calculated from the initial compliance demonstration.

(B) The owner or operator may establish separate levels for each batch emission episode or combination of emission episodes selected to be controlled. If separate monitoring levels are established, the owner or operator must provide a record indicating at what point in the daily schedule or log of processes required to be recorded per the requirements of § 63.1367(b)(7), the parameter being monitored changes levels and must record at least one reading of the new parameter level, even if the duration of monitoring for the new parameter level is less than 15 minutes.

VI. Appendix B: Equipment Leak Standards from 40 CFR 63, Subparts MMM and H

63.1363 Standards for equipment leaks.

(a) *General equipment leak requirements*

(1) The provisions of this section apply to "equipment" as defined in § 63.1361. The provisions of this section also apply to any closed-vent systems and control devices required by this section.

(2) *Consistency with other regulations.* After the compliance date for a process, equipment subject to both this section and either of the following will be required to comply only with the provisions of this subpart:

(i) 40 CFR part 60.

(ii) 40 CFR part 61.

(3) [Reserved]

(4) The provisions in § 63.1(a)(3) of subpart A of this part do not alter the provisions in paragraph (a)(2) of this section.

(5) Lines and equipment not containing process fluids are not subject to the provisions of this section. Utilities, and other nonprocess lines, such as heating and cooling systems which do not combine their materials with those in the processes they serve, are not considered to be part of a process.

(6) The provisions of this section do not apply to bench-scale processes, regardless of whether the processes are located at the same plant site as a process subject to the provisions of this subpart MMM.

(7) Each piece of equipment to which this section applies shall be identified such that it can be distinguished readily from equipment that is not subject to this section. Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, or by designation of process boundaries by some form of weatherproof identification. If changes are made to the affected source subject to the leak detection requirements, equipment identification for each type of component shall be updated, if needed, within 15 calendar days of the end of each monitoring period for that component.

(8) Equipment that is in vacuum service is excluded from the requirements of this section.

(9) Equipment that is in organic HAP service, but is in such service less than 300 hours per calendar year, is excluded from the requirements of this section if it is identified as required in paragraph (g)(9) of this section.

(10) When each leak is detected by visual, audible, or olfactory means, or by monitoring as described in § 63.180(b) or (c) of subpart H of this part, the following requirements apply:

(i) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

(ii) The identification on a valve in light liquid or gas/vapor service may be removed after it has been monitored as specified in paragraph (e)(7)(iii) of this section, and no leak has been detected during the follow-up monitoring. If an owner or operator elects to comply with § 63.174(c)(1)(i), the identification on a connector may be removed after it has been monitored as specified in § 63.174(c)(1)(i) and no leak is detected during that monitoring.

(iii) The identification on equipment, except as specified in paragraph (a)(10)(ii) of this section, may be removed after it has been repaired.

(b) *References.* The owner or operator shall comply with the provisions of subpart H of this part as specified in paragraphs (b)(1) through (3) of this section. When the term "process unit" is used in subpart H of this part, it shall mean any group of processes for the purposes of this subpart. Groups of processes as used in this subpart may be any individual process or combination of processes.

(1) *[This paragraph lists the sections of subpart H that shall not apply. Since only the applicable sections of subpart H have been included in this document, this list has been dropped.]*

(2) The owner or operator shall comply with §§ 63.164, 63.165, 63.166, 63.169, 63.177, and 63.179 of subpart H of this part in their entirety, except that when these sections reference other sections of subpart H of this part, the owner or operator shall comply with the revised sections as specified in paragraphs (b)(1) and (3) of this section. Section 63.164 of subpart H of this part applies to compressors. Section 63.165 of subpart H of this part applies to pressure relief devices in gas/vapor service. Section 63.166 of subpart H of this part applies to sampling connection systems. Section 63.169 of subpart H of this part applies to: pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service.

Section 63.177 of subpart H of this subpart applies to general alternative means of emission limitation. Section 63.179 of subpart H of this part applies to alternative means of emission limitation for enclosed-vented process units.

(3) *[The applicable sections of 40 CFR 63 subpart H have been inserted below. Changes specified by 63.1363(b)(3) have been made.]*

§ 63.164 Standards: Compressors.

- (a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of process fluid to the atmosphere, except as provided in § 63.162(b) of this subpart and paragraphs (h) and (i) of this section.
- (b) Each compressor seal system as required in paragraph (a) of this section shall be:
 - (1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or
 - (2) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of § 63.172 of this subpart; or
 - (3) Equipped with a closed-loop system that purges the barrier fluid directly into a process stream.
- (c) The barrier fluid shall not be in light liquid service.
- (d) Each barrier fluid system as described in paragraphs (a) through (c) of this section shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.
- (e)
 - (1) Each sensor as required in paragraph (d) of this section shall be observed daily or shall be equipped with an alarm unless the compressor is located within the boundary of an unmanned plant site.
 - (2) The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.
- (f) If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under paragraph (e)(2) of this section, a leak is detected.
- (g)
 - (1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in § 63.171 of this subpart.
 - (2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
- (h) A compressor is exempt from the requirements of paragraphs (a) through (g) of this section if it is equipped with a closed-vent system to capture and transport leakage from the compressor drive shaft seal back to a process or a fuel gas system or to a control device that complies with the requirements of § 63.172 of this subpart.
- (i) Any compressor that is designated, as described in § 63.181(b)(2)(ii) of this subpart, to operate with an instrument reading of less than 500 parts per million above background, is exempt from the requirements of paragraphs (a) through (h) of this section if the compressor:
 - (1) Is demonstrated to be operating with an instrument reading of less than 500 parts per million above background, as measured by the method specified in § 63.180(c) of this subpart; and
 - (2) Is tested for compliance with paragraph (i)(1) of this section initially upon designation, annually, and at other times requested by the Administrator.

§ 63.165 Standards: Pressure relief devices in gas/vapor service.

- (a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with an instrument reading of less than 500 parts per million above background except as provided in paragraph (b) of this section, as measured by the method specified in § 63.180(c) of this subpart.
- (b)
 - (1) After each pressure release, the pressure relief device shall be returned to a condition indicated by an instrument reading of less than 500 parts per million above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in § 63.171 of this subpart.
 - (2) No later than 5 calendar days after the pressure release and being returned to organic HAP service, the pressure relief device shall be monitored to confirm the condition indicated by an instrument reading of less than 500 parts per million above background, as measured by the method specified in § 63.180(c) of this subpart.
- (c) Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in § 63.172 of this subpart is exempt from the requirements of paragraphs (a) and (b) of this section.

(d)

(1) Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of paragraphs (a) and (b) of this section, provided the owner or operator complies with the requirements in paragraph (d)(2) of this section.

(2) After each pressure release, a rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in § 63.171 of this subpart.

§ 63.166 Standards: Sampling connection systems.

(a) Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in § 63.162(b) of this subpart. Gases displaced during filling of the sample container are not required to be collected or captured.

(b) Each closed-purge, closed-loop, or closed-vent system as required in paragraph (a) of this section shall:

(1) Return the purged process fluid directly to the process line; or

(2) Collect and recycle the purged process fluid to a process; or

(3) Be designed and operated to capture and transport the purged process fluid to a control device that complies with the requirements of § 63.172 of this subpart; or

(4) Collect, store, and transport the purged process fluid to a system or facility identified in paragraph (b)(4)(i), (ii), or (iii) of this section.

(i) A waste management unit as defined in § 63.111 of subpart G of this part, if the waste management unit is subject to, and operated in compliance with the provisions of subpart G of this part applicable to group 1 wastewater streams. If the purged process fluid does not contain any organic HAP listed in Table 9 of subpart G of part 63, the waste management unit need not be subject to, and operated in compliance with the requirements of 40 CFR part 63, subpart G applicable to group 1 wastewater streams provided the facility has an NPDES permit or sends the wastewater to an NPDES permitted facility.

(ii) A treatment, storage, or disposal facility subject to regulation under 40 CFR part 262, 264, 265, or 266; or

(iii) A facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR part 261.

(c) In-situ sampling systems and sampling systems without purges are exempt from the requirements of paragraphs (a) and (b) of this section.

§ 63.169 Standards: Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service.

(a) Pumps, valves, connectors, and agitators in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and instrumentation systems shall be monitored within 5 calendar days by the method specified in § 63.180(b) of this subpart if evidence of a potential leak to the atmosphere is found by visual, audible, olfactory, or any other detection method. If such a potential leak is repaired as required in paragraphs (c) and (d) of this section, it is not necessary to monitor the system for leaks by the method specified in § 63.180(b) of this subpart.

(b) If an instrument reading of 10,000 parts per million or greater for agitators, 5,000 parts per million or greater for pumps handling polymerizing monomers, 2,000 parts per million or greater for all other pumps (including pumps in food/medical service), or 500 parts per million or greater for valves, connectors, instrumentation systems, and pressure relief devices is measured, a leak is detected.

(c)

(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in § 63.171 of this subpart.

(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(3) For equipment identified in paragraph (a) of this section that is not monitored by the method specified in § 63.180(b), repaired shall mean that the visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated; that no bubbles are observed at potential leak sites during a leak check using soap solution; or that the system will hold a test pressure.

(d) First attempts at repair include, but are not limited to, the practices described under §§ 63.163(c)(2) and 63.168(g) of this subpart, for pumps and valves, respectively.

§ 63.171 Standards: Delay of repair.

- (a) replaced by 63.1363(b)(3)(i) Delay of repair of equipment for which leaks have been detected is allowed if one of the following conditions exist:
- (A) The repair is technically infeasible without a process shutdown. Repair of this equipment shall occur by the end of the next scheduled process shutdown.
 - (B) The owner or operator determines that repair personnel would be exposed to an immediate danger if attempting to repair without a process shutdown. Repair of this equipment shall occur by the end of the next scheduled process shutdown.
- (b) Delay of repair of equipment for which leaks have been detected is allowed for equipment that is isolated from the process and that does not remain in organic HAP service.
- (c) Delay of repair for valves, connectors, and agitators is also allowed if:
- (1) The owner or operator determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair, and
 - (2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with § 63.172 of this subpart.
- (d) Delay of repair for pumps is also allowed if:
- (1) Repair requires replacing the existing seal design with a new system that the owner or operator has determined under the provisions of § 63.176(d) of this subpart will provide better performance or:
 - (i) A dual mechanical seal system that meets the requirements of § 63.163(e) of this subpart,
 - (ii) A pump that meets the requirements of § 63.163(f) of this subpart, or
 - (iii) A closed-vent system and control device that meets the requirements of § 63.163(g) of this subpart; and
 - (2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.
- (e) Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit shutdown will not be allowed unless the third process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

§ 63.172 Standards: Closed-vent systems and control devices.

- (a) Owners or operators of closed-vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of this section, except as provided in § 63.162(b) of this subpart.
- (b) Recovery or recapture devices (e.g., condensers and absorbers) shall be designed and operated to recover the organic hazardous air pollutant emissions or volatile organic compounds emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, whichever is less stringent. The 20 parts per million by volume performance standard is not applicable to the provisions of § 63.179.
- (c) Enclosed combustion devices shall be designed and operated to reduce the organic hazardous air pollutant emissions or volatile organic compounds emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent, or to provide a minimum residence time of 0.50 seconds at a minimum temperature of 760 °C.
- (d) Flares used to comply with this subpart shall comply with the requirements of § 63.11(b) of subpart A of this part.
- (e) Owners or operators of control devices that are used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their design.
- Note: The intent of this provision is to ensure proper operation and maintenance of the control device.
- (f) Except as provided in paragraphs (k) and (l) of this section, each closed-vent system shall be inspected according to the procedures and schedule specified in paragraphs (f)(1) and (f)(2) of this section.
- (1) If the closed-vent system is constructed of hard-piping, the owner or operator shall:
 - (i) Conduct an initial inspection according to the procedures in paragraph (g) of this section, and
 - (ii) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.
 - (2) If the vapor collection system or closed-vent system is constructed of duct work, the owner or operator shall:
 - (i) Conduct an initial inspection according to the procedures in paragraph (g) of this section, and
 - (ii) Conduct annual inspections according to the procedures in paragraph (g) of this section.

Note: 63.1363(b)(3)(ii)(B) Owners or operators may, instead of complying with the provisions of § 63.172(f), design a closed-vent system to operate at a pressure below atmospheric pressure. The system shall be equipped with at least one pressure gauge or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the associated control device is operating.

(g) Each closed-vent system shall be inspected according to the procedures in § 63.180(b) of this subpart.

(h) Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in paragraph (i) of this section.

(1) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(2) Repair shall be completed no later than 15 calendar days after the leak is detected, except as provided in paragraph (i) of this section.

(i) Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown.

(j) For each closed-vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the owner or operator shall comply with the provisions of either paragraph (j)(1) or (j)(2) of this section, except as provided in paragraph (j)(3) of this section.

(1) Install, set or adjust, maintain, and operate a flow indicator that takes a reading at least once every 15 minutes. Records shall be generated as specified in § 63.118(a)(3) of subpart G of this part. The flow indicator shall be installed at the entrance to any bypass line; or

(2) Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass line.

(3) Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to this paragraph.

(k) and (l) These paragraphs shall not apply. The owner or operator shall instead comply with 63.1363 paragraph (f), provisions for unsafe to monitor, difficult-to-monitor, and inaccessible equipment. [63.1363(b)(3)(ii)(A)]

(m) Whenever organic HAP emissions are vented to a closed-vent system or control device used to comply with the provisions of this subpart, such system or control device shall be operating.

(n) After the compliance dates specified in § 63.100 of subpart F of this part, the owner or operator of any control device subject to this subpart that is also subject to monitoring, recordkeeping, and reporting requirements in 40 CFR part 264, subpart BB, or is subject to monitoring and recordkeeping requirements in 40 CFR part 265, subpart BB, may elect to comply either with the monitoring, recordkeeping, and reporting requirements of this subpart, or with the monitoring, recordkeeping, and reporting requirements in 40 CFR parts 264 and/or 265, as described in this paragraph, which shall constitute compliance with the monitoring, recordkeeping and reporting requirements of this subpart. The owner or operator shall identify which option has been chosen, in the next periodic report required by § 63.182(d).

§ 63.174 Standards: Connectors in gas/vapor service and in light liquid service.

(a) The owner or operator of a process unit subject to this subpart shall monitor all connectors in gas/vapor and light liquid service, except as provided in § 63.162(b) of this subpart, and in paragraphs (f) through (h) of this section, at the intervals specified in paragraph (b) of this section.

(1) The connectors shall be monitored to detect leaks by the method specified in § 63.180(b) of this subpart.

(2) If an instrument reading greater than or equal to 500 parts per million is measured, a leak is detected.

(b) Replaced by 63.1363(b)(3)(iii)(C) through (G).

(C) If the percent leaking connectors in a group of processes was greater than or equal to 0.5 percent during the initial monitoring period, monitoring shall be performed once per year until the percent leaking connectors is less than 0.5 percent.

(D) If the percent leaking connectors in the group of processes was less than 0.5 percent, but equal to or greater than 0.25 percent, during the last required monitoring period, monitoring shall be performed once every 4 years. An owner or operator may comply with the requirements of this paragraph by monitoring at least 40 percent of the connectors in the first 2 years and the remainder of the connectors within the next 2 years. The percent leaking connectors will be calculated for the total of all monitoring performed during the 4-year period.

(E) The owner or operator shall increase the monitoring frequency to once every 2 years for the next monitoring period if leaking connectors comprise at least 0.5 percent but less than 1.0 percent of the connectors monitored within either the 4 years specified in paragraph (b)(3)(iii)(D) of this section, the first 4 years specified in paragraph (b)(3)(iii)(G) of this section, or the entire 8 years specified in paragraph (b)(3)(iii)(G) of this section. At the end of that 2-year monitoring period, the owner or operator shall monitor once per year while the percent leaking connectors is greater than or equal to 0.5 percent; if the percent leaking connectors is less than 0.5 percent, the owner or operator may again elect to monitor in accordance with paragraph (b)(3)(iii)(D) or (G) of this section, as applicable.

(F) If an owner or operator complying with the requirements of paragraph (b)(3)(iii)(D) or (G) of this section for a group of processes determines that 1 percent or greater of the connectors are leaking, the owner or operator shall increase the monitoring frequency to one time per year. The owner or operator may again elect to use the provisions of paragraph (b)(3)(iii)(D) or (G) of this section after a monitoring period in which less than 0.5 percent of the connectors are determined to be leaking.

(G) Monitoring shall be required once every 8 years, if the percent leaking connectors in the group of process units was less than 0.25 percent during the last required monitoring period. An owner or operator shall monitor at least 50 percent of the connectors in the first 4 years and the remainder of the connectors within the next 4 years. If the percent leaking connectors in the first 4 years is equal to or greater than 0.35 percent, the monitoring program shall revert at that time to the appropriate monitoring frequency specified in paragraph (b)(3)(iii)(D), (E), or (F) of this section.

(c)

(1)

(i) Except as provided in paragraph (c)(1)(ii) of this section, each connector that has been opened or has otherwise had the seal broken shall be monitored for leaks when it is reconnected or within the first 3 months after being returned to organic hazardous air pollutants service. If the monitoring detects a leak, it shall be repaired according to the provisions of paragraph (d) of this section, unless it is determined to be nonrepairable, in which case it is counted as a nonrepairable connector for the purposes of paragraph (i)(2) of this section.

Note: 63.1363(b)(3)(iii)(B) Days that the connectors are not in organic HAP service shall not be considered part of the 3-month period in § 63.174(c).

(ii) As an alternative to the requirements in paragraph (c)(1)(i) of this section, an owner or operator may choose not to monitor connectors that have been opened or otherwise had the seal broken. In this case, the owner or operator may not count nonrepairable connectors for the purposes of paragraph (i)(2) of this section. The owner or operator shall calculate the percent leaking connectors for the monitoring periods described in paragraph (b) of this section, by setting the nonrepairable component, CAN, in the equation in paragraph (i)(2) of this section to zero for all monitoring periods.

(iii) An owner or operator may switch alternatives described in paragraphs (c)(1)(i) and (ii) of this section at the end of the current monitoring period he is in, provided that it is reported as required in § 63.182 of this subpart and begin the new alternative in annual monitoring. The initial monitoring in the new alternative shall be completed no later than 12 months after reporting the switch.

(2) As an alternative to the requirements of paragraph (b)(3) of this section, each screwed connector 2 inches or less in nominal inside diameter installed in a process unit before the dates specified in paragraph (c)(2)(iii) or (c)(2)(iv) of this section may:

(i) Comply with the requirements of § 63.169 of this subpart, and

(ii) Be monitored for leaks within the first 3 months after being returned to organic hazardous air pollutants service after having been opened or otherwise had the seal broken. If that monitoring detects a leak, it shall be repaired according to the provisions of paragraph (d) of this section.

(iii) For sources subject to subparts F and I of this part, the provisions of paragraph (c)(2) of this section apply to screwed connectors installed before December 31, 1992.

(iv) For sources not identified in paragraph (c)(2)(iii) of this section, the provisions of paragraph (c)(2) of this section apply to screwed connectors installed before the date of proposal of the applicable subpart of this part that references this subpart.

(d) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in paragraph (g) of this section and in § 63.171 of this subpart. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(e) [Reserved]

(f), (g) and (h) These paragraphs shall not apply. The owner or operator shall instead comply with 63.1363 paragraph (f), provisions for unsafe to monitor, difficult-to-monitor, and inaccessible equipment.
[63.1363(b)(3)(iii)(A)]

(i) For use in determining the monitoring frequency, as specified in paragraph (b) of this section, the percent leaking connectors shall be calculated as specified in paragraphs (i)(1) and (i)(2) of this section.

(1) For the first monitoring period, use the following equation:

$$\% \text{ CL} = \text{CL} / (\text{Ct} + \text{CC}) \times 100$$

where:

% CL= Percent leaking connectors as determined through periodic monitoring required in paragraphs (a) and (b) of this section.

CL= Number of connectors measured at 500 parts per million or greater, by the method specified in § 63.180(b) of this subpart.

Ct= Total number of monitored connectors in the process unit.

CC= Optional credit for removed connectors = $0.67 \times \text{net}$ (i.e., total removed -- total added) number of connectors in organic hazardous air pollutants service removed from the process unit after the compliance date set forth in the applicable subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then CC= 0.

(2) For subsequent monitoring periods, use the following equation:

$$\% \text{ CL} = [(\text{CL} - \text{CAN}) / (\text{Ct} + \text{CC})] \times 100$$

where:

% CL= Percent leaking connectors as determined through periodic monitoring required in paragraphs (a) and (b) of this section.

CL= Number of connectors, including nonrepairables, measured at 500 parts per million or greater, by the method specified in § 63.180(b) of this subpart.

CAN= Number of allowable nonrepairable connectors, as determined by monitoring required in paragraphs (b)(3) and (c) of this section, not to exceed 2 percent of the total connector population, Ct.

Ct= Total number of monitored connectors, including nonrepairables, in the process unit.

CC= Optional credit for removed connectors = $0.67 \times \text{net}$ number (i.e., total removed -- total added) of connectors in organic hazardous air pollutants service removed from the process unit after the compliance date set forth in the applicable subpart for existing process units, and after the date of initial start-up for new process units. If credits are not taken, then CC= 0.

(j) Optional credit for removed connectors. If an owner or operator eliminates a connector subject to monitoring under paragraph (b) of this section, the owner or operator may receive credit for elimination of the connector, as described in paragraph (i) of this section, provided the requirements in paragraphs (j)(1) through (j)(4) are met.

(1) The connector was welded after the date of proposal of the specific subpart that references this subpart.

(2) The integrity of the weld is demonstrated by monitoring it according to the procedures in § 63.180(b) of this subpart or by testing using X-ray, acoustic monitoring, hydrotesting, or other applicable method.

(3) Welds created after the date of proposal but before the date of promulgation of a specific subpart that references this subpart are monitored or tested by 3 months after the compliance date specified in the applicable subpart.

(4) Welds created after promulgation of the subpart that references this subpart are monitored or tested within 3 months after being welded.

(5) If an inadequate weld is found or the connector is not welded completely around the circumference, the connector is not considered a welded connector and is therefore not exempt from the provisions of this subpart.

§ 63.177 Alternative means of emission limitation: General.

(a) Permission to use an alternative means of emission limitation under section 112(h)(3) of the Act shall be governed by the following procedures in paragraphs (b) through (e) of this section.

- (b) Where the standard is an equipment, design, or operational requirement:
 - (1) Each owner or operator applying for permission to use an alternative means of emission limitation under § 63.6(g) of subpart A of this part shall be responsible for collecting and verifying emission performance test data for an alternative means of emission limitation.
 - (2) The Administrator will compare test data for the means of emission limitation to test data for the equipment, design, and operational requirements.
 - (3) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same emission reduction as the equipment, design, and operational requirements.
- (c) Where the standard is a work practice:
 - (1) Each owner or operator applying for permission shall be responsible for collecting and verifying test data for an alternative means of emission limitation.
 - (2) For each kind of equipment for which permission is requested, the emission reduction achieved by the required work practices shall be demonstrated for a minimum period of 12 months.
 - (3) For each kind of equipment for which permission is requested, the emission reduction achieved by the alternative means of emission limitation shall be demonstrated.
 - (4) Each owner or operator applying for permission shall commit, in writing, for each kind of equipment to work practices that provide for emission reductions equal to or greater than the emission reductions achieved by the required work practices.
 - (5) The Administrator will compare the demonstrated emission reduction for the alternative means of emission limitation to the demonstrated emission reduction for the required work practices and will consider the commitment in paragraph (c)(4) of this section.
 - (6) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same or greater emission reduction as the required work practices of this subpart.
- (d) An owner or operator may offer a unique approach to demonstrate the alternative means of emission limitation.
- (e)
 - (1) Manufacturers of equipment used to control equipment leaks of an organic HAP may apply to the Administrator for permission for an alternative means of emission limitation that achieves a reduction in emissions of the organic HAP achieved by the equipment, design, and operational requirements of this subpart.
 - (2) The Administrator will grant permission according to the provisions of paragraphs (b), (c), and (d) of this section.

§ 63.178 Alternative means of emission limitation: Batch processes.

- (a) As an alternative to complying with the requirements of §§ 63.163 through 63.171 and §§ 63.173 through 63.176, an owner or operator of a batch process that operates in organic HAP service during the calendar year may comply with one of the standards specified in paragraphs (b) and (c) of this section, or the owner or operator may petition for approval of an alternative standard under the provisions of § 63.177 of this subpart. The alternative standards of this section provide the options of pressure testing or monitoring the equipment for leaks. The owner or operator may switch among the alternatives provided the change is documented as specified in § 63.181.
- (b) The following requirements shall be met if an owner or operator elects to use pressure testing of batch product-process equipment to demonstrate compliance with this subpart. An owner or operator who complies with the provisions of this paragraph is exempt from the monitoring provisions of § 63.163, §§ 63.168 and 63.169, and §§ 63.173 through 63.176 of this subpart.

Note: 63.1363(b)(3)(iv)(A) Section 63.178(b), requirements for pressure testing, shall apply to all processes, not just batch processes.

- (1) Each time equipment is reconfigured for production of a different product or intermediate, the batch product-process equipment train shall be pressure-tested for leaks before organic HAP is first fed to the equipment and the equipment is placed in organic HAP service.
 - (i) When the batch product-process train is reconfigured to produce a different product, pressure testing is required only for the new or disturbed equipment.
 - (ii) Each batch product process that operates in organic HAP service during a calendar year shall be pressure tested at least once during that calendar year.
 - (iii) Pressure testing is not required for routine seal breaks, such as changing hoses or filters, which are not part of the reconfiguration to produce a different product or intermediate.

- (2) The batch product process equipment shall be tested either using the procedures specified in § 63.180(f) of this subpart for pressure or vacuum loss or with a liquid using the procedures specified in § 63.180(g) of this subpart.
- (3)
- (i) For pressure or vacuum tests, a leak is detected if the rate of change in pressure is greater than 6.9 kilopascals (1 psig) in 1 hour or if there is visible, audible, or olfactory evidence of fluid loss.
 - (ii) For pressure tests using a liquid, a leak is detected if there are indications of liquids dripping or if there is other evidence of fluid loss.
- (4)
- (i) If a leak is detected, it shall be repaired and the batch product-process equipment shall be retested before start-up of the process.
 - (ii) If a batch product-process fails the retest or the second of two consecutive pressure tests, it shall be repaired as soon as practicable, but not later than 30 calendar days after the second pressure test, provided the conditions specified in paragraph (d) of this section are met.
- (c) The following requirements shall be met if an owner or operator elects to monitor the equipment to detect leaks by the method specified in § 63.180(b) of this subpart to demonstrate compliance with this subpart.
- (1) The owner or operator shall comply with the requirements of §§ 63.163 through 63.170, and §§ 63.172 through 63.176 of this subpart.
 - (2) The equipment shall be monitored for leaks by the method specified in § 63.180(b) of this subpart when the equipment is in organic HAP service, in use with an acceptable surrogate volatile organic compound which is not an organic HAP, or is in use with any other detectable gas or vapor.
 - (3) The equipment shall be monitored for leaks as specified below:
 - (i) Each time the equipment is reconfigured for the production of a new product, the reconfigured equipment shall be monitored for leaks within 30 days of start-up of the process. This initial monitoring of reconfigured equipment shall not be included in determining percent leaking equipment in the process unit.
 - (ii) Connectors shall be monitored in accordance with the requirements in § 63.174 of this subpart.
 - (iii) Equipment other than connectors shall be monitored at the frequencies specified in table 1 of this subpart. The operating time shall be determined as the proportion of the year the batch product-process that is subject to the provisions of this subpart is operating.

Note: 63.1363(b)(3)(iv)(B) For pumps, the phrase "at the frequencies specified in Table 1 of this subpart" in § 63.178(c)(3)(iii) shall mean "quarterly" for the purposes of 40 CFR 63, Subpart MMM.

 - (iv) The monitoring frequencies specified in table 1 of this subpart are not requirements for monitoring at specific intervals and can be adjusted to accommodate process operations. An owner or operator may monitor anytime during the specified monitoring period (e.g., month, quarter, year), provided the monitoring is conducted at a reasonable interval after completion of the last monitoring campaign. For example, if the equipment is not operating during the scheduled monitoring period, the monitoring can be done during the next period when the process is operating.
 - (4) If a leak is detected, it shall be repaired as soon as practicable but not later than 15 calendar days after it is detected, except as provided in paragraph (d) of this section.
- (d) Delay of repair of equipment for which leaks have been detected is allowed if the replacement equipment is not available providing the following conditions are met:
- (1) Equipment supplies have been depleted and supplies had been sufficiently stocked before the supplies were depleted.
 - (2) The repair is made no later than 10 calendar days after delivery of the replacement equipment.

§ 63.179 Alternative means of emission limitation: Enclosed-vented process units.

Process units enclosed in such a manner that all emissions from equipment leaks are vented through a closed-vent system to a control device meeting the requirements of § 63.172 of this subpart are exempt from the requirements of § 63.163, through 63.171, and §§ 63.173 and 63.174 of this subpart. The enclosure shall be maintained under a negative pressure at all times while the process unit is in operation to ensure that all emissions are routed to a control device.

§ 63.180 Test methods and procedures.

- (a) Each owner or operator subject to the provisions of this subpart shall comply with the test methods and procedures requirements provided in this section.
- (b) Monitoring, as required under this subpart, shall comply with the following requirements:
- (1) Monitoring shall comply with Method 21 of 40 CFR part 60, appendix A.
 - (2)
 - (i) Except as provided for in paragraph (b)(2)(ii) of this section, the detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in Section 3.1.2(a) of Method 21 shall be for the average composition of the process fluid not each individual VOC in the stream. For process streams that contain nitrogen, water, air, or other inerts which are not organic HAP's or VOC's, the average stream response factor may be calculated on an inert-free basis. The response factor may be determined at any concentration for which monitoring for leaks will be conducted.
 - (ii) If no instrument is available at the plant site that will meet the performance criteria specified in paragraph (b)(2)(i) of this section, the instrument readings may be adjusted by multiplying by the average response factor of the process fluid, calculated on an inert-free basis as described in paragraph (b)(2)(i) of this section.
 - (3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A.
 - (4) Calibration gases shall be:
 - (i) Zero air (less than 10 parts per million of hydrocarbon in air); and
 - (ii) Mixtures of methane in air at the concentrations specified in paragraphs (b)(4)(ii)(A) through (b)(4)(ii)(C) of this section. A calibration gas other than methane in air may be used if the instrument does not respond to methane or if the instrument does not meet the performance criteria specified in paragraph (b)(2)(i) of this section. In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air.
 - (A), (B), and (C) have been replaced by 63.1363(b)(3)(v). Calibration gases shall be a mixture of methane and air at a concentration of approximately, but less than, 10,000 parts per million methane for agitators, 2,000 parts per million for pumps, and 500 parts per million for all other equipment, except as provided in § 63.180(b)(4)(iii).
 - (iii) The instrument may be calibrated at a higher methane concentration than the concentration specified for that piece of equipment. The concentration of the calibration gas may exceed the concentration specified as a leak by no more than 2,000 parts per million. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 parts per million above the concentration specified as a leak and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 parts per million. If only one scale on an instrument will be used during monitoring, the owner or operator need not calibrate the scales that will not be used during that day's monitoring.
 - (5) Monitoring shall be performed when the equipment is in organic HAP service, in use with an acceptable surrogate volatile organic compound which is not an organic HAP, or is in use with any other detectable gas or vapor.
 - (6) Monitoring data that do not meet the criteria specified in paragraphs (b)(1) through (b)(5) of this section may be used to qualify for less frequent monitoring under the provisions in § 63.168(d)(2) and (d)(3) or § 63.174(b)(3)(ii) or (b)(3)(iii) of this subpart provided the data meet the conditions specified in paragraphs (b)(6)(i) and (b)(6)(ii) of this section.
 - (i) The data were obtained before April 22, 1994.
 - (ii) The departures from the criteria specified in paragraphs (b)(1) through (b)(5) of this section or from the specified monitoring frequency of § 63.168(c) are minor and do not significantly affect the quality of the data. Examples of minor departures are monitoring at a slightly different frequency (such as every six weeks instead of monthly or quarterly), following the performance criteria of section 3.1.2(a) of Method 21 of appendix A of 40 CFR part 60 instead of paragraph (b)(2) of this section, or monitoring at a different leak definition if the data would indicate the presence or absence of a leak at the concentration specified in this subpart. Failure to use a calibrated instrument is not considered a minor departure.
 - (c) When equipment is monitored for compliance as required in §§ 63.164(i), 63.165(a), and 63.172(f) or when equipment subject to a leak definition of 500 ppm is monitored for leaks as required by this subpart, the owner or

operator may elect to adjust or not to adjust the instrument readings for background. If an owner or operator elects to not adjust instrument readings for background, the owner or operator shall monitor the equipment according to the procedures specified in paragraphs (b)(1) through (b)(4) of this section. In such case, all instrument readings shall be compared directly to the applicable leak definition to determine whether there is a leak. If an owner or operator elects to adjust instrument readings for background, the owner or operator shall monitor the equipment according to the procedures specified in paragraphs (c)(1) through (c)(4) of this section.

(1) The requirements of paragraphs (b) (1) through (4) of this section shall apply.

(2) The background level shall be determined, using the same procedures that will be used to determine whether the equipment is leaking.

(3) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Method 21 of 40 CFR part 60, appendix A.

(4) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 parts per million for determining compliance.

(d)

(1) Each piece of equipment within a process unit that can reasonably be expected to contain equipment in organic HAP service is presumed to be in organic HAP service unless an owner or operator demonstrates that the piece of equipment is not in organic HAP service. For a piece of equipment to be considered not in organic HAP service, it must be determined that the percent organic HAP content can be reasonably expected not to exceed 5 percent by weight on an annual average basis. For purposes of determining the percent organic HAP content of the process fluid that is contained in or contacts equipment, Method 18 of 40 CFR part 60, appendix A shall be used.

(2)

(i) An owner or operator may use good engineering judgment rather than the procedures in paragraph (d)(1) of this section to determine that the percent organic HAP content does not exceed 5 percent by weight.

When an owner or operator and the Administrator do not agree on whether a piece of equipment is not in organic HAP service, however, the procedures in paragraph (d)(1) of this section shall be used to resolve the disagreement.

(ii) Conversely, the owner or operator may determine that the organic HAP content of the process fluid does not exceed 5 percent by weight by, for example, accounting for 98 percent of the content and showing that organic HAP is less than 3 percent.

(3) If an owner or operator determines that a piece of equipment is in organic HAP service, the determination can be revised after following the procedures in paragraph (d)(1) of this section, or by documenting that a change in the process or raw materials no longer causes the equipment to be in organic HAP service.

(4) Samples used in determining the percent organic HAP content shall be representative of the process fluid that is contained in or contacts the equipment.

(e) When a flare is used to comply with § 63.172(d), the owner or operator shall comply with paragraphs (e)(1) through (3) of this section. The owner or operator is not required to conduct a performance test to determine percent emission reduction or outlet organic HAP or TOC concentration.

(1) Conduct a visible emission test using the techniques specified in § 63.11(b)(4).

(2) Determine the net heating value of the gas being combusted using the techniques specified in § 63.11(b)(6).

(3) Determine the exit velocity using the techniques specified in either § 63.11(b)(7)(i) (and § 63.11(b)(7)(iii), where applicable) or § 63.11(b)(8), as appropriate.

(f) The following procedures shall be used to pressure test batch product-process equipment for pressure or vacuum loss to demonstrate compliance with the requirements of § 63.178(b)(3)(i) of this subpart.

(1) The batch product-process equipment train shall be pressurized with a gas to a pressure less than the set pressure of any safety relief devices or valves or to a pressure slightly above the operating pressure of the equipment, or alternatively, the equipment shall be placed under a vacuum.

(2) Once the test pressure is obtained, the gas source or vacuum source shall be shut off.

(3) The test shall continue for not less than 15 minutes unless it can be determined in a shorter period of time that the allowable rate of pressure drop or of pressure rise was exceeded. The pressure in the batch product-process equipment shall be measured after the gas or vacuum source is shut off and at the end of the test period. The rate of change in pressure in the batch product-process equipment shall be calculated using the following equation:

$$\Delta \frac{P}{t} = \frac{(P_f - P_i)}{(t_f - t_i)}$$

where:

Δ P/t=Change in pressure, psig/hr.

Pf=Final pressure, psig.

Pi=Initial pressure, psig.

tf−ti=Elapsed time, hours.

- (4) The pressure shall be measured using a pressure measurement device (gauge, manometer, or equivalent) which has a precision of ± 2.5 millimeter mercury in the range of test pressure and is capable of measuring pressures up to the relief set pressure of the pressure relief device. If such a pressure measurement device is not reasonably available, the owner or operator shall use a pressure measurement device with a precision of at least +10 percent of the test pressure of the equipment and shall extend the duration of the test for the time necessary to detect a pressure loss or rise that equals a rate of one psig per hour.
 - (5) An alternative procedure may be used for leak testing the equipment if the owner or operator demonstrates the alternative procedure is capable of detecting a pressure loss or rise.
 - (g) The following procedures shall be used to pressure-test batch product-process equipment using a liquid to demonstrate compliance with the requirements of § 63.178(b)(3)(ii) of this subpart.
 - (1) The batch product-process equipment train, or section of the train, shall be filled with the test liquid (e.g., water, alcohol) until normal operating pressure is obtained. Once the equipment is filled, the liquid source shall be shut off.
 - (2) The test shall be conducted for a period of at least 60 minutes, unless it can be determined in a shorter period of time that the test is a failure.
 - (3) Each seal in the equipment being tested shall be inspected for indications of liquid dripping or other indications of fluid loss. If there are any indications of liquids dripping or of fluid loss, a leak is detected.
 - (4) An alternative procedure may be used for leak testing the equipment, if the owner or operator demonstrates the alternative procedure is capable of detecting losses of fluid.
-

(c) *standards for pumps in light liquid service and agitators in gas/vapor service and in light liquid service.*

(1) The provisions of this section apply to each pump that is in light liquid service, and to each agitator in gas/vapor service or in light liquid service.

(2)

(i) *Monitoring.* Each pump and agitator subject to this section shall be monitored quarterly to detect leaks by the method specified in § 63.180(b), except as provided in §§ 63.177, 63.178, paragraph (f) of this section, and paragraphs (c)(5) through (9) of this section.

(ii) *Leak definition.* The instrument reading, as determined by the method as specified in § 63.180(b) of subpart H of this part, that defines a leak is:

(A) For agitators, an instrument reading of 10,000 parts per million or greater.

(B) For pumps, an instrument reading of 2,000 parts per million or greater.

(iii) *Visual inspections.* Each pump and agitator shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump or agitator seal. If there are indications of liquids dripping from the seal at the time of the weekly inspection, the owner or operator shall follow the procedure specified in either paragraph (c)(2)(iii)(A) or (B) of this section prior to the next weekly inspection.

(A) The owner or operator shall monitor the pump or agitator by the method specified in § 63.180(b). If the instrument reading indicates a leak as specified in paragraph (c)(2)(ii) of this section, a leak is detected.

(B) The owner or operator shall eliminate the visual indications of liquids dripping.

(3) *Repair provisions.*

(i) When a leak is detected pursuant to paragraph (c)(2)(i), (c)(2)(iii)(A), (c)(5)(iv)(A), or (c)(5)(vi)(B) of this section, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in paragraph (b)(3)(i) of this section.

(ii) If, calculated on a 1-year rolling average, 10 percent or more of the pumps in a group of processes (or 3 pumps in a group of processes with fewer than 30 pumps) leak, the owner or operator shall monitor each pump once per month, until the calculated 1-year rolling average value drops below 10 percent (or three pumps in a group of processes with fewer than 30 pumps).

(4) *Calculation of percent leakers.*

(i) The owner or operator shall decide no later than the end of the first monitoring period what groups of processes will be developed. Once the owner or operator has decided, all subsequent percent calculations shall be made on the same basis.

(ii) If, calculated on a 1 year rolling average, the greater of either 10 percent or three of the pumps in a group of processes leak, the owner or operator shall monitor each pump once per month.

(iii) The number of pumps in a group of processes shall be the sum of all the pumps in organic HAP service, except that pumps found leaking in a continuous process within 1 quarter after startup of the pump shall not count in the percent leaking pumps calculation for that one monitoring period only.

(iv) Percent leaking pumps shall be determined using Equation 3 of this subpart:

$$\%P_L = \left[(P_L - P_S) / (P_T - P_S) \right] \times 100 \quad (\text{Eq. 3})$$

where:

%PL = percent leaking pumps

PL = number of pumps found leaking as determined through quarterly monitoring as required in paragraphs (c)(2)(i) and (ii) of this section.

PT = total pumps in organic HAP service, including those meeting the criteria in paragraphs (c)(5) and (6) of this section

PS = number of pumps in a continuous process leaking within 1 quarter of startup during the current monitoring period

(5) *Exemptions.* Each pump or agitator equipped with a dual mechanical seal system that includes a barrier fluid system and meets the requirements specified in paragraphs (c)(5)(i) through (vii) is exempt from the requirements of paragraphs (c)(1) through (c)(4)(iii) of this section, except as specified in paragraphs (c)(5)(iv)(A) and (vii) of this section.

- (i) Each dual mechanical seal system is:
 - (A) Operated with the barrier fluid at a pressure that is at all times greater than the pump/agitator stuffing box pressure; or
 - (B) Equipped with a barrier fluid degassing reservoir that is connected by a closed-vent system to a control device that complies with the requirements of paragraph (b)(3)(ii) of this section; or
 - (C) Equipped with a closed-loop system that purges the barrier fluid into a process stream.
- (ii) The barrier fluid is not in light liquid service.
- (iii) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.
- (iv) Each pump/agitator is checked by visual inspection each calendar week for indications of liquids dripping from the pump/agitator seal. If there are indications of liquids dripping from the pump or agitator seal at the time of the weekly inspection, the owner or operator shall follow the procedures specified in either paragraph (c)(5)(iv)(A) or (B) of this section prior to the next required inspection.
 - (A) The owner or operator shall monitor the pump or agitator using the method specified in § 63.180(b) to determine if there is a leak of organic HAP in the barrier fluid. If the instrument reading indicates a leak, as specified in paragraph (c)(2)(ii) of this section, a leak is detected.
 - (B) The owner or operator shall eliminate the visual indications of liquids dripping.
- (v) Each sensor as described in paragraph (c)(5)(iii) of this section is observed daily or is equipped with an alarm unless the pump is located within the boundary of an unmanned plant site.
- (vi)
 - (A) The owner or operator determines, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicate failure of the seal system, the barrier fluid system, or both.
 - (B) If indications of liquids dripping from the pump/agitator seal exceed the criteria established in paragraph (c)(5)(vi)(A) of this section, or if, based on the criteria established in paragraph (c)(5)(vi)(A) of this section, the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected.
- (vii) When a leak is detected pursuant to paragraph (c)(5)(iv)(A) or (vi)(B) of this section, the leak must be repaired as specified in paragraph (c)(3) of this section.
- (6) Any pump/agitator that is designed with no externally actuated shaft penetrating the pump/agitator housing is exempt from the requirements of paragraphs (c)(1) through (3) of this section.
- (7) Any pump/agitator equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals back to the process or to a control device that complies with the requirements of paragraph (b)(3)(ii) of this section is exempt from the requirements of paragraphs (c)(2) through (5) of this section.
- (8) Any pump/agitator that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (c)(2)(iii) and (c)(5)(iv) of this section, and the daily requirements of paragraph (c)(5)(v) of this section, provided that each pump/agitator is visually inspected as often as practicable and at least monthly.
- (9) If more than 90 percent of the pumps in a group of processes meet the criteria in either paragraph (c)(5) or (6) of this section, the group of processes is exempt from the requirements of paragraph (c)(4) of this section.
- (d) *Standards: open-ended valves or lines.*
 - (1)
 - (i) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in § 63.177 of subpart H of this part and paragraphs (d)(4) through (6) of this section.
 - (ii) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance or repair. The cap, blind flange, plug, or second valve shall be in place within 1 hour of cessation of operations requiring process fluid flow through the open-ended valve or line, or within 1 hour of cessation of maintenance or repair.
 - (2) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.
 - (3) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (d)(1) of this section at all other times.

- (4) Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs (d)(1) through (3) of this section.
- (5) Open-ended valves or lines containing materials which would autocatalytically polymerize are exempt from the requirements of paragraphs (d)(1) through (3) of this section.
- (6) Open-ended valves or lines containing materials which could cause an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in paragraphs (d)(1) through (3) of this section are exempt from the requirements of paragraphs (d)(1) through (3) of this section.

(e) *Standards: valves in gas/vapor service and in light liquid service.*

(1) The provisions of this section apply to valves that are either in gas/vapor service or in light liquid service.

(2) For existing and new affected sources, all valves subject to this section shall be monitored, except as provided in paragraph (f) of this section and in § 63.177 of subpart H of this part, by no later than 1 year after the compliance date.

(3) *Monitoring.* The owner or operator of a source subject to this section shall monitor all valves, except as provided in paragraph (f) of this section and in § 63.177 of subpart H of this part, at the intervals specified in paragraph (e)(4) of this section and shall comply with all other provisions of this section, except as provided in paragraph (b)(3)(i) of this section and §§ 63.178 and 63.179 of subpart H of this part.

(i) The valves shall be monitored to detect leaks by the method specified in § 63.180(b) of subpart H of this part.

(ii) An instrument reading of 500 parts per million or greater defines a leak.

(4) *Subsequent monitoring frequencies.* After conducting the initial survey required in paragraph (e)(2) of this section, the owner or operator shall monitor valves for leaks at the intervals specified below:

(i) For a group of processes with 2 percent or greater leaking valves, calculated according to paragraph (e)(6) of this section, the owner or operator shall monitor each valve once per month, except as specified in paragraph (e)(9) of this section.

(ii) For a group of processes with less than 2 percent leaking valves, the owner or operator shall monitor each valve once each quarter, except as provided in paragraphs (e)(4)(iii) through (v) of this section.

(iii) For a group of processes with less than 1 percent leaking valves, the owner or operator may elect to monitor each valve once every 2 quarters.

(iv) For a group of processes with less than 0.5 percent leaking valves, the owner or operator may elect to monitor each valve once every 4 quarters.

(v) For a group of processes with less than 0.25 percent leaking valves, the owner or operator may elect to monitor each valve once every 2 years.

(5) *Calculation of percent leakers.* For a group of processes to which this subpart applies, the owner or operator may choose to subdivide the valves in the applicable group of processes and apply the provisions of paragraph (e)(4) of this section to each subgroup. If the owner or operator elects to subdivide the valves in the applicable group of processes, then the provisions of paragraphs (e)(5)(i) through (viii) of this section apply.

(i) The overall performance of total valves in the applicable group of processes must be less than 2 percent leaking valves, as detected according to paragraphs (e)(3)(i) and (ii) of this section and as calculated according to paragraphs (e)(6)(ii) and (iii) of this section.

(ii) The initial assignment or subsequent reassignment of valves to subgroups shall be governed by the provisions of paragraphs (e)(5)(ii) (A) through (C) of this section.

(A) The owner or operator shall determine which valves are assigned to each subgroup. Valves with less than 1 year of monitoring data or valves not monitored within the last 12 months must be placed initially into the most frequently monitored subgroup until at least 1 year of monitoring data have been obtained.

(B) Any valve or group of valves can be reassigned from a less frequently monitored subgroup to a more frequently monitored subgroup provided that the valves to be reassigned were monitored during the most recent monitoring period for the less frequently monitored subgroup. The monitoring results must be included with the less frequently monitored subgroup's monitoring event and associated next percent leaking valves calculation for that group.

(C) Any valve or group of valves can be reassigned from a more frequently monitored subgroup to a less frequently monitored subgroup provided that the valves to be reassigned have not leaked for the period of the less frequently monitored subgroup (e.g., for the last 12 months, if the valve or group of valves is to be reassigned to a subgroup being monitored annually). Nonrepairable valves may not be reassigned to a less frequently monitored subgroup.

(iii) The owner or operator shall determine every 6 months if the overall performance of total valves in the applicable group of processes is less than 2 percent leaking valves and so indicate the performance in the next Periodic report. If the overall performance of total valves in the applicable group of processes is 2 percent leaking valves or greater, the owner or operator shall revert to the program required in paragraphs (e)(2) through (4) of this section. The overall performance of total valves in the applicable group of processes shall be calculated as a weighted average of the percent leaking valves of each subgroup according to Equation 4 of this subpart:

$$\%V_{LO} = \frac{\sum_{i=1}^n (\%V_{Li} \times V_i)}{\sum_{i=1}^n V_i} \quad (Eq. 4)$$

where:

%VLO = overall performance of total valves in the applicable group of processes

%VLi = percent leaking valves in subgroup i, most recent value calculated according to the procedures in paragraphs (e)(6)(ii) and (iii) of this section

Vi = number of valves in subgroup i

n = number of subgroups

(iv) *Records.* In addition to records required by paragraph (g) of this section, the owner or operator shall maintain records specified in paragraphs (e)(5)(iv)(A) through (D) of this section.

(A) Which valves are assigned to each subgroup,

(B) Monitoring results and calculations made for each subgroup for each monitoring period,

(C) Which valves are reassigned and when they were reassigned, and

(D) The results of the semiannual overall performance calculation required in paragraph (e)(5)(iii) of this section.

(v) The owner or operator shall notify the Administrator no later than 30 days prior to the beginning of the next monitoring period of the decision to subgroup valves. The notification shall identify the participating processes and the valves assigned to each subgroup.

(vi) *Semiannual reports.* In addition to the information required by paragraph (h)(3) of this section, the owner or operator shall submit in the Periodic reports the information specified in paragraphs (e)(5)(vi)(A) and (B) of this section.

(A) Valve reassignments occurring during the reporting period, and

(B) Results of the semiannual overall performance calculation required by paragraph (e)(5)(iii) of this section.

(vii) To determine the monitoring frequency for each subgroup, the calculation procedures of paragraph (e)(6)(iii) of this section shall be used.

(viii) Except for the overall performance calculations required by paragraphs (e)(5)(i) and (iii) of this section, each subgroup shall be treated as if it were a process for the purposes of applying the provisions of this section.

(6)

(i) The owner or operator shall decide no later than the implementation date of this subpart or upon revision of an operating permit how to group the processes. Once the owner or operator has decided, all subsequent percentage calculations shall be made on the same basis.

(ii) Percent leaking valves for each group of processes or subgroup shall be determined using Equation 5 of this subpart:

$$\%V_L = [V_L/V_T] \times 100 \quad (Eq. 5)$$

Where:

%VL = percent leaking valves

VL = number of valves found leaking excluding nonrepairables as provided in paragraph (e)(6)(iv)(A) of this section

VT = total valves monitored, in a monitoring period excluding valves monitored as required by paragraph (e)(7)(iii) of this section

(iii) When determining monitoring frequency for each group of processes or subgroup subject to monthly, quarterly, or semiannual monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last two monitoring periods. When determining monitoring frequency for each group of processes or subgroup subject to annual or biennial (once every 2 years) monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last three monitoring periods.

(iv)

(A) Nonrepairable valves shall be included in the calculation of percent leaking valves the first time the valve is identified as leaking and nonrepairable and as required to comply with paragraph (e)(6)(iv)(B) of this section. Otherwise, a number of nonrepairable valves (identified and included in the percent leaking calculation in a previous period) up to a maximum of 1 percent of the total number of valves in organic HAP service at a process may be excluded from calculation of percent leaking valves for subsequent monitoring periods.

(B) If the number of nonrepairable valves exceeds 1 percent of the total number of valves in organic HAP service at a process, the number of nonrepairable valves exceeding 1 percent of the total number of valves in organic HAP service shall be included in the calculation of percent leaking valves.

(7) Repair provisions.

(i) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in paragraph (b)(3)(i) of this section.

(ii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(iii) When a leak is repaired, the valve shall be monitored at least once within the first 3 months after its repair. Days that the valve is not in organic HAP service shall not be considered part of this 3-month period. The monitoring required by this paragraph is in addition to the monitoring required to satisfy the definitions of "repaired" and "first attempt at repair."

(A) The monitoring shall be conducted as specified in § 63.180(b) and (c) as appropriate, to determine whether the valve has resumed leaking.

(B) Periodic monitoring required by paragraphs (e)(2) through (4) of this section may be used to satisfy the requirements of paragraph (e)(7)(iii) of this section, if the timing of the monitoring period coincides with the time specified in paragraph (e)(7)(iii) of this section. Alternatively, other monitoring may be performed to satisfy the requirements of paragraph (e)(7)(iii) of this section, regardless of whether the timing of the monitoring period for periodic monitoring coincides with the time specified in paragraph (e)(7)(iii) of this section.

(C) If a leak is detected by monitoring that is conducted pursuant to paragraph (e)(7)(iii) of this section, the owner or operator shall follow the provisions of paragraphs (e)(7)(iii)(C)(1) and (2) of this section to determine whether that valve must be counted as a leaking valve for purposes of paragraph (e)(6) of this section.

(1) If the owner or operator elects to use periodic monitoring required by paragraphs (e)(2) through (4) of this section to satisfy the requirements of paragraph (e)(7)(iii) of this section, then the valve shall be counted as a leaking valve.

(2) If the owner or operator elects to use other monitoring prior to the periodic monitoring required by paragraphs (e)(2) through (4) of this section to satisfy the requirements of paragraph (e)(7)(iii) of this section, then the valve shall be counted as a leaking valve unless it is repaired and shown by periodic monitoring not to be leaking.

(8) First attempts at repair include, but are not limited to, the following practices where practicable:

(i) Tightening of bonnet bolts,

(ii) Replacement of bonnet bolts,

(iii) Tightening of packing gland nuts, and

(iv) Injection of lubricant into lubricated packing.

(9) Any equipment located at a plant site with fewer than 250 valves in organic HAP service in the affected source is exempt from the requirements for monthly monitoring specified in paragraph (e)(4)(i) of this section. Instead, the owner or operator shall monitor each valve in organic HAP service for leaks once each quarter, or comply with paragraph (e)(4)(iii), (iv), or (v) of this section, except as provided in paragraph (f) of this section.

(f) *Unsafe to monitor, difficult-to-monitor, and inaccessible equipment.*

(1) Equipment that is designated as unsafe-to-monitor, difficult-to-monitor, or inaccessible is exempt from the requirements as specified in paragraphs (f)(1)(i) through (iv) of this section provided the owner or operator meets the requirements specified in paragraph (f)(2), (3), or (4) of this section, as applicable. All equipment, except connectors that meet the requirements in paragraph (f)(4) of this section, must be assigned to a group of processes. Ceramic or ceramic-lined connectors are subject to the same requirements as inaccessible connectors.

(i) For pumps and agitators, paragraphs (c)(2), (3), and (4) of this section do not apply.

(ii) For valves, paragraphs (e)(2) through (7) of this section do not apply.

(iii) For connectors, § 63.174(b) through (e) and paragraphs (b)(3)(iii)(C) through (G) of this section do not apply.

(iv) For closed-vent systems, § 63.172(f)(1), (f)(2), and (g) do not apply.

(2) *Equipment that is unsafe-to-monitor.*

(i) Valves, connectors, agitators, and any part of closed-vent systems may be designated as unsafe-to-monitor if the owner or operator determines that monitoring personnel would be exposed to an immediate danger as a consequence of complying with the monitoring requirements identified in paragraphs (f)(1)(i) through (iii) of this section, or the inspection requirements identified in paragraph (f)(1)(iv) of this section.

(ii) The owner or operator of equipment that is designated as unsafe-to-monitor must have a written plan that requires monitoring of the equipment as frequently as practicable during safe-to-monitor times. For valves, connectors, and agitators, monitoring shall not be more frequent than the periodic monitoring schedule otherwise applicable to the group of processes in which the equipment is located. For closed-vent systems, inspections shall not be more frequent than annually.

(3) *Equipment that is difficult-to-monitor.*

(i) A valve, agitator, pump, or any part of a closed-vent system may be designated as difficult-to-monitor if the owner or operator determines that the equipment cannot be monitored or inspected without elevating the monitoring personnel more than 2 meters above a support surface or the equipment is not accessible in a safe manner when it is in organic HAP service;

(ii) At a new affected source, an owner or operator may designate no more than 3 percent of valves as difficult-to-monitor.

(iii) The owner or operator of valves, agitators, or pumps designated as difficult-to-monitor must have a written plan that requires monitoring of the equipment at least once per calendar year or on the periodic monitoring schedule otherwise applicable to the group of processes in which the equipment is located, whichever is less frequent. For any part of a closed-vent system designated as difficult-to-monitor, the owner or operator must have a written plan that requires inspection of the closed-vent system at least once every 5 years.

(4) *Inaccessible, ceramic, or ceramic-lined connectors.*

(i) A connector may be designated as inaccessible if it is:

(A) Buried;

(B) Insulated in a manner that prevents access to the equipment by a monitor probe;

(C) Obstructed by equipment or piping that prevents access to the equipment by a monitor probe;

(D) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold which would allow access to equipment up to 7.6 meters above the ground; or

(E) Not able to be accessed at any time in a safe manner to perform monitoring. Unsafe access includes, but is not limited to, the use of a wheeled scissor-lift on unstable or uneven terrain, the use of a motorized man-lift basket in areas where an ignition potential exists, or access would require near proximity to hazards such as electrical lines, or would risk damage to equipment.

(F) Would require elevating the monitoring personnel more than 2 meters above a permanent support surface or would require the erection of scaffold.

(ii) At a new affected source, an owner or operator may designate no more than 3 percent of connectors as inaccessible.

(iii) If any inaccessible, ceramic, or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the leak shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in paragraph (b)(3)(i) of this section.

(iv) Any connector that is inaccessible or that is ceramic or ceramic-lined is exempt from the recordkeeping and reporting requirements of paragraphs (g) and (h) of this section.

(g) *Recordkeeping requirements.*

(1) An owner or operator of more than one group of processes subject to the provisions of this section may comply with the recordkeeping requirements for the groups of processes in one recordkeeping system if the system identifies with each record the program being implemented (e.g., quarterly monitoring) for each type of equipment. All records and information required by this section shall be maintained in a manner that can be readily accessed at the plant site. This could include physically locating the records at the plant site or accessing the records from a central location by computer at the plant site.

(2) *General recordkeeping.* Except as provided in paragraph (g)(5) of this section, the following information pertaining to all equipment subject to the requirements in this section shall be recorded:

(i)

(A) A list of identification numbers for equipment (except instrumentation systems) subject to the requirements of this section. Connectors, except those subject to paragraph (f) of this section, need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of this section are identified as a group, and the number of subject connectors is indicated. The list for each type of equipment shall be completed no later than the completion of the initial survey required for that component. The list of identification numbers shall be updated, if needed, to incorporate equipment changes within 15 calendar days of the completion of each monitoring survey for the type of equipment component monitored.

(B) A schedule for monitoring connectors subject to the provisions of § 63.174(a) of subpart H of this part and valves subject to the provisions of paragraph (e)(4) of this section.

(C) Physical tagging of the equipment is not required to indicate that it is in organic HAP service. Equipment subject to the provisions of this section may be identified on a plant site plan, in log entries, or by other appropriate methods.

(ii)

(A) A list of identification numbers for equipment that the owner or operator elects to equip with a closed-vent system and control device, under the provisions of paragraph (c)(7) of this section or §§ 63.164(h) or 63.165(c) of subpart H of this part.

(B) A list of identification numbers for compressors that the owner or operator elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of § 63.164(i) of subpart H of this part.

(iii)

(A) A list of identification numbers for pressure relief devices subject to the provisions in § 63.165(a) of subpart H of this part.

(B) A list of identification numbers for pressure relief devices equipped with rupture disks, under the provisions of § 63.165(d) of subpart H of this part.

(iv) Identification of instrumentation systems subject to the provisions of this section. Individual components in an instrumentation system need not be identified.

(v) The following information shall be recorded for each dual mechanical seal system:

(A) Design criteria required by paragraph (c)(5)(vi)(A) of this section and § 63.164(e)(2) of subpart H of this part, and an explanation of the design criteria; and

(B) Any changes to these criteria and the reasons for the changes.

(vi) A list of equipment designated as unsafe-to-monitor or difficult-to-monitor under paragraph (f) of this section and a copy of the plan for monitoring this equipment.

(vii) A list of connectors removed from and added to the process, as described in § 63.174(i)(1) of subpart H of this part, and documentation of the integrity of the weld for any removed connectors, as required in § 63.174(j) of subpart H of this part. This is not required unless the net credits for removed connectors is expected to be used.

(viii) For batch processes that the owner or operator elects to monitor as provided under § 63.178(c) of subpart H of this part, a list of equipment added to batch product processes since the last monitoring period required in § 63.178(c)(3)(ii) and (iii) of subpart H of this part. This list must be completed for each type of equipment within 15 calendar days of the completion of the each monitoring survey for the type of equipment monitored.

(3) *Records of visual inspections.* For visual inspections of equipment subject to the provisions of paragraphs (c)(2)(iii) and (c)(5)(iv) of this section, the owner or operator shall document that the inspection was conducted and the date of the inspection. The owner or operator shall maintain records as specified in paragraph (g)(4) of

this section for leaking equipment identified in this inspection, except as provided in paragraph (g)(5) of this section. These records shall be retained for 5 years.

(4) *Monitoring records.* When each leak is detected as specified in paragraphs (c) and (e) of this section and §§ 63.164, 63.169, 63.172, and 63.174 of subpart H of this part, the owner or operator shall record the information specified in paragraphs (g)(4)(i) through (ix) of this section. All records shall be retained for 5 years, in accordance with the requirements of § 63.10(b)(1) of subpart A of this part.

(i) The instrument and the equipment identification number and the operator name, initials, or identification number.

(ii) The date the leak was detected and the date of first attempt to repair the leak.

(iii) The date of successful repair of the leak.

(iv) If postrepair monitoring is required, maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A, after it is successfully repaired or determined to be nonrepairable.

(v) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(A) The owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. The written procedures may be included as part of the startup/shutdown/malfunction plan, required by § 63.1367(a), for the source or may be part of a separate document that is maintained at the plant site. Reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(B) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked onsite before depletion and the reason for depletion.

(vi) If repairs were delayed, dates of process shutdowns that occur while the equipment is unrepaired.

(vii)

(A) If the alternative in § 63.174(c)(1)(ii) of subpart H of this part is not in use for the monitoring period, identification, either by list, location (area or grouping), or tagging of connectors disturbed since the last monitoring period required in § 63.174(b) of subpart H of this part, as described in § 63.174(c)(1) of subpart H of this part.

(B) The date and results of follow-up monitoring as required in § 63.174(c) of subpart H of this part. If identification of disturbed connectors is made by location, then all connectors within the designated location shall be monitored.

(viii) The date and results of the monitoring required in § 63.178(c)(3)(i) of subpart H of this part for equipment added to a batch process since the last monitoring period required in § 63.178(c)(3)(ii) and (iii) of subpart H of this part. If no leaking equipment is found in this monitoring, the owner or operator shall record that the inspection was performed. Records of the actual monitoring results are not required.

(ix) Copies of the periodic reports as specified in paragraph (h)(3) of this section, if records are not maintained on a computerized data base capable of generating summary reports from the records.

(5) *Records of pressure tests.* The owner or operator who elects to pressure test a process equipment train and supply lines between storage and processing areas to demonstrate compliance with this section is exempt from the requirements of paragraphs (g)(2), (3), (4), and (6) of this section. Instead, the owner or operator shall maintain records of the following information:

(i) The identification of each product, or product code, produced during the calendar year. It is not necessary to identify individual items of equipment in the process equipment train.

(ii) Records demonstrating the proportion of the time during the calendar year the equipment is in use in the process that is subject to the provisions of this subpart. Examples of suitable documentation are records of time in use for individual pieces of equipment or average time in use for the process unit. These records are not required if the owner or operator does not adjust monitoring frequency by the time in use, as provided in § 63.178(c)(3)(iii) of subpart H of this part.

(iii) Physical tagging of the equipment to identify that it is in organic HAP service and subject to the provisions of this section is not required. Equipment in a process subject to the provisions of this section may be identified on a plant site plan, in log entries, or by other appropriate methods.

(iv) The dates of each pressure test required in § 63.178(b) of subpart H of this part, the test pressure, and the pressure drop observed during the test.

(v) Records of any visible, audible, or olfactory evidence of fluid loss.

(vi) When a process equipment train does not pass two consecutive pressure tests, the following information shall be recorded in a log and kept for 2 years:

(A) The date of each pressure test and the date of each leak repair attempt.

- (B) Repair methods applied in each attempt to repair the leak.
 - (C) The reason for the delay of repair.
 - (D) The expected date for delivery of the replacement equipment and the actual date of delivery of the replacement equipment.
 - (E) The date of successful repair.
- (6) *Records of compressor and pressure relief valve compliance tests.* The dates and results of each compliance test required for compressors subject to the provisions in § 63.164(i) of subpart H of this part and the dates and results of the monitoring following a pressure release for each pressure relief device subject to the provisions in § 63.165(a) and (b) of subpart H of this part. The results shall include:
- (i) The background level measured during each compliance test.
 - (ii) The maximum instrument reading measured at each piece of equipment during each compliance test.
- (7) *Records for closed-vent systems.* The owner or operator shall maintain records of the information specified in paragraphs (g)(7)(i) through (iii) of this section for closed-vent systems and control devices subject to the provisions of paragraph (b)(3)(ii) of this section. The records specified in paragraph (g)(7)(i) of this section shall be retained for the life of the equipment. The records specified in paragraphs (g)(7)(ii) and (iii) of this section shall be retained for 5 years.
- (i) The design specifications and performance demonstrations specified in paragraphs (g)(7)(i)(A) through (D) of this section.
 - (A) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams.
 - (B) The dates and descriptions of any changes in the design specifications.
 - (C) The flare design (i.e., steam assisted, air assisted, or nonassisted) and the results of the compliance demonstration required by § 63.11(b) of subpart A of this part.
 - (D) A description of the parameter or parameters monitored, as required in paragraph (b)(3)(ii) of this section, to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.
 - (ii) Records of operation of closed-vent systems and control devices.
 - (A) Dates and durations when the closed-vent systems and control devices required in paragraph (c) of this section and §§ 63.164 through 63.166 of subpart H of this part are not operated as designed as indicated by the monitored parameters, including periods when a flare pilot light system does not have a flame.
 - (B) Dates and durations during which the monitoring system or monitoring device is inoperative.
 - (C) Dates and durations of startups and shutdowns of control devices required in paragraph (c) of this section and §§ 63.164 through 63.166 of subpart H of this part.
 - (iii) Records of inspections of closed-vent systems subject to the provisions of § 63.172 of subpart H of this part.
 - (A) For each inspection conducted in accordance with the provisions of § 63.172(f)(1) or (2) of subpart H of this part during which no leaks were detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.
 - (B) For each inspection conducted in accordance with the provisions of § 63.172(f)(1) or (f)(2) of subpart H of this part during which leaks were detected, the information specified in paragraph (g)(4) of this section shall be recorded.
- (8) *Records for components in heavy liquid service.* Information, data, and analysis used to determine that a piece of equipment or process is in heavy liquid service shall be recorded. Such a determination shall include an analysis or demonstration that the process fluids do not meet the criteria of "in light liquid or gas/vapor service." Examples of information that could document this include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations, or process knowledge.
- (9) *Records of exempt components.* Identification, either by list, location (area or group), or other method of equipment in organic HAP service less than 300 hr/yr subject to the provisions of this section.
- (10) *Records of alternative means of compliance determination.* Owners and operators choosing to comply with the requirements of § 63.179 of subpart H of this part shall maintain the following records:
- (i) Identification of the process(es) and the organic HAP they handle.
 - (ii) A schematic of the process, enclosure, and closed-vent system.
 - (iii) A description of the system used to create a negative pressure in the enclosure to ensure that all emissions are routed to the control device.

(h) *Reporting Requirements.*

(1) Each owner or operator of a source subject to this section shall submit the reports listed in paragraphs (h)(1)(i) and (ii) of this section.

(i) A Notification of Compliance Status report described in paragraph (h)(2) of this section, and

(ii) Periodic reports described in paragraph (h)(3) of this section.

(2) *Notification of compliance status report.* Each owner or operator of a source subject to this section shall submit the information specified in paragraphs (h)(2)(i) through (iii) of this section in the Notification of Compliance Status report described in § 63.1368(f). Section 63.9(j) of subpart A of this part shall not apply to the Notification of Compliance Status report.

(i) The notification shall provide the information listed in paragraphs (h)(2)(i)(A) through (C) of this section for each group of processes subject to the requirements of paragraphs (b) through (g) of this section.

(A) Identification of the group of processes.

(B) Approximate number of each equipment type (e.g., valves, pumps) in organic HAP service, excluding equipment in vacuum service.

(C) Method of compliance with the standard (for example, "monthly leak detection and repair" or "equipped with dual mechanical seals").

(ii) The notification shall provide the information listed in paragraphs (h)(2)(ii)(A) and (B) of this section for each process subject to the requirements of paragraph (b)(3)(iv) of this section and § 63.178(b) of subpart H of this part.

(A) Products or product codes subject to the provisions of this section, and

(B) Planned schedule for pressure testing when equipment is configured for production of products subject to the provisions of this section.

(iii) The notification shall provide the information listed in paragraphs (h)(2)(iii)(A) and (B) of this section for each process subject to the requirements in § 63.179 of subpart H of this part.

(A) Process identification.

(B) A description of the system used to create a negative pressure in the enclosure and the control device used to comply with the requirements of paragraph (b)(3)(ii) of this section.

(3) *Periodic reports.* The owner or operator of a source subject to this section shall submit Periodic reports.

(i) A report containing the information in paragraphs (h)(3)(ii), (iii), and (iv) of this section shall be submitted semiannually. The first Periodic report shall be submitted no later than 240 days after the date the Notification of Compliance Status report is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status report is due. Each subsequent Periodic report shall cover the 6-month period following the preceding period.

(ii) For equipment complying with the provisions of paragraphs (b) through (g) of this section, the Periodic report shall contain the summary information listed in paragraphs (h)(3)(ii)(A) through (L) of this section for each monitoring period during the 6-month period.

(A) The number of valves for which leaks were detected as described in paragraph (e)(2) of this section, the percent leakers, and the total number of valves monitored;

(B) The number of valves for which leaks were not repaired as required in paragraph (e)(7) of this section, identifying the number of those that are determined nonreparable;

(C) The number of pumps and agitators for which leaks were detected as described in paragraph (c)(2) of this section, the percent leakers, and the total number of pumps and agitators monitored;

(D) The number of pumps and agitators for which leaks were not repaired as required in paragraph (c)(3) of this section;

(E) The number of compressors for which leaks were detected as described in § 63.164(f) of subpart H of this part;

(F) The number of compressors for which leaks were not repaired as required in § 63.164(g) of subpart H of this part;

(G) The number of connectors for which leaks were detected as described in § 63.174(a) of subpart H of this part, the percent of connectors leaking, and the total number of connectors monitored;

(H) The number of connectors for which leaks were not repaired as required in § 63.174(d) of subpart H of this part, identifying the number of those that are determined nonreparable;

(I) The facts that explain any delay of repairs and, where appropriate, why a process shutdown was technically infeasible.

(J) The results of all monitoring to show compliance with §§ 63.164(i), 63.165(a), and 63.172(f) of subpart H of this part conducted within the semiannual reporting period.

- (K) If applicable, the initiation of a monthly monitoring program under either paragraph (c)(4)(ii) or paragraph (e)(4)(i)(A) of this section.
- (L) If applicable, notification of a change in connector monitoring alternatives as described in § 63.174(c)(1) of subpart H of this part.
- (iii) For owners or operators electing to meet the requirements of § 63.178(b) of subpart H of this part, the Periodic report shall include the information listed in paragraphs (h)(3)(iii) (A) through (E) of this section for each process.
 - (A) Product process equipment train identification;
 - (B) The number of pressure tests conducted;
 - (C) The number of pressure tests where the equipment train failed either the retest or two consecutive pressure tests;
 - (D) The facts that explain any delay of repairs; and
 - (E) The results of all monitoring to determine compliance with § 63.172(f) of subpart H of this part.
- (iv) Any change in the information submitted under paragraph (h)(2) of this section shall be provided in the next Periodic report.

VII. Appendix C: Wastewater Standards - 40 CFR 63, Subpart MMM

40 CFR 63.1362

(d) Wastewater. The owner or operator of each affected source shall comply with the requirements of Sec. Sec. 63.132 through 63.147, with the differences noted in paragraphs (d)(1) through (16) of this section for the purposes of this subpart.

(1) When the determination of equivalence criteria in §63.102(b) is referred to in §§ 63.132, 63.133, and 63.137 of subpart G of this part, the provisions in §63.6(g) of subpart A of this part shall apply.

(2) When the storage tank requirements contained in Sec. Sec. 63.119 through 63.123 are referred to in Sec. Sec. 63.132 through 63.147, Sec. Sec. 63.119 through 63.123 are applicable, with the exception of the differences noted in paragraphs (d)(2)(i) through (iv) of this section.

(i) When the term "storage vessel" is used in §§63.119 through 63.123 of subpart G of this part, the definition of the term "storage vessel" in §63.1361 shall apply for the purposes of this subpart.

(ii) When December 31, 1992, is referred to in §63.119 of subpart G of this part, November 10, 1997 shall apply for the purposes of this subpart.

(iii) When April 22, 1994 is referred to in §63.119 of subpart G of this part June 23, 1999 shall apply for the purposes of this subpart.

(iv) When the phrase "the compliance date specified in §63.100 of subpart F of this part" is referred to in §63.120 of subpart G of this part, the phrase "the compliance date specified in §63.1364" shall apply for the purposes of this subpart.

(v) Reserved

(3) To request approval to monitor alternative parameters, as referred to in § 63.146(a) of subpart G of this part, the owner or operator shall comply with the procedures in § 63.8(f) of subpart A of this part, as referred to in §63.1366(b)(4), instead of the procedures in § 63.151(f) or (g) of subpart G of this part.

(4) When the Notification of Compliance Status report requirements contained in § 63.152(b) of subpart G of this part are referred to in §63.146 of subpart G of this part, the Notification of Compliance Status report requirements in §63.1368(f) shall apply for the purposes of this subpart.

(5) When the recordkeeping requirements contained in §63.152(f) of subpart G of this part are referred to in §63.147(d) of subpart G of this part, the recordkeeping requirements in § 63.1367 shall apply for the purposes of this subpart.

(6) When the Periodic report requirements contained in §63.152(c) of subpart G of this subpart are referred to in §§63.146 and 63.147 of subpart G of this part, the Periodic report requirements contained in §63.1368(g) shall apply for the purposes of this subpart.

(7) The term "process wastewater" in §§63.132 through 63.147 of subpart G of this subpart shall mean "wastewater" as defined in §63.1361 for the purposes of this subpart.

(8) When the term "Group 1 wastewater stream" is used in §§63.132 through 63.147 of subpart G of this part, the definition of the term "Group 1 wastewater stream" in §63.1361 shall apply for both new sources and existing sources for the purposes of this subpart.

(9) The requirements in §§63.132 through 63.147 for compounds listed on Table 8 of subpart G of this part shall not apply for the purposes of this subpart.

(10) When the total load of Table 9 compounds in the sum of all process wastewater from PAI process units at a new affected source is 2,100 Mg/yr (2,300 tons/yr) or more, the owner or operator shall reduce, by removal or destruction, the mass flow rate of all compounds in Table 9 of subpart G of this part in all wastewater (process and maintenance wastewater) by 99 percent or more. Alternatively, the owner or operator may treat the wastewater in a unit identified in and complying with §63.138(h) of subpart G of this part. The removal/destruction efficiency shall be determined by the procedures specified in §63.145(c) of subpart G of this part, for noncombustion processes, or §63.145(d) of subpart G of this part, for combustion processes.

(11) The compliance date for the affected source subject to the provisions of this section is specified in §63.1364.

(12) As an alternative to using Method 18 of 40 CFR part 60, as specified in Sec. Sec. 63.139(c)(1)(ii) and 63.145(i)(2), the owner or operator may elect to use Method 25 or Method 25A of 40 CFR part 60, as specified in Sec. 63.1365(b).

(13) The requirement to correct outlet concentrations from combustion devices to 3 percent oxygen in Sec. 63.139(c)(1)(ii) shall apply only if supplemental gases are combined with affected vent streams, and the procedures in Sec. 63.1365(a)(7)(i) apply instead of the procedures in Sec. 63.145(i)(6) to determine the percent oxygen correction. If emissions are controlled with a vapor recovery system as specified in Sec. 63.139(c)(2), the owner or operator must correct for supplemental gases as specified in Sec. 63.1365(a)(7)(ii).

(14) As an alternative to the management and treatment options specified in Sec. 63.132(g)(2), any Group 1 wastewater stream (or residual removed from a Group 1 wastewater stream) that contains less than 50 ppmw of HAP listed in Table 2 to subpart GGG of this part may be transferred offsite or to an on-site treatment operation not owned or operated by the owner or operator of the source generating the wastewater (or residual) if the transferee manages and treats the wastewater stream or residual in accordance with paragraphs (d)(14)(i) through (iv) of this section.

(i) Treat the wastewater stream or residual in a biological treatment unit in accordance with Sec. Sec. 63.138 and 63.145.

(ii) Cover the waste management units up to the activated sludge unit. Alternatively, covers are not required if the owner or operator demonstrates that less than 5 percent of the total HAP listed in Table 3 to subpart GGG of this part is emitted.

(iii) Inspect covers as specified in Sec. 63.1366(h).

(iv) The reference in Sec. 63.132(g)(2) to "Sec. 63.102(b) of subpart F" does not apply for the purposes of this subpart.

(15) When Sec. 63.133 refers to Table 10 to subpart G of this part, the maximum true vapor pressures in the table shall be limited to the HAP listed in Table 9 to subpart G of this part.

(16) When the inspection, recordkeeping, and reporting requirements contained in Sec. 63.148 are referred to in Sec. Sec. 63.132 through 63.147, the inspection requirements in Sec. 63.1366(h), the recordkeeping requirements in Sec. 63.1367(f), and the reporting requirements in Sec. 63.1368(g)(2)(iii) and (xi) shall apply for the purposes of this subpart.

VIII. Appendix D: 40 CFR 63, Subpart MMM, Table 1

Reference to subpart A	Applies to subpart MMM	Explanation
Sec. 63.1(a)(1)	Yes	Additional terms are defined in Sec. 63.1361.
Sec. 63.1(a)(2)-(3)	Yes	
Sec. 63.1(a)(4)	Yes	Subpart MMM (this table) specifies applicability of each paragraph in subpart A to subpart MMM.
Sec. 63.1(a)(5)	N/A	Reserved.
Sec. 63.1(a)(6)-(7)	Yes	
Sec. 63.1(a)(8)	No	Discusses State programs.
Sec. 63.1(a)(9)	N/A	Reserved.
Sec. 63.1(a)(10)-(14)	Yes	
Sec. 63.1(b)(1)	No	Sec. 63.1360 specifies applicability.
Sec. 63.1(b)(2)-(3)	Yes	
Sec. 63.1(c)(1)	Yes	Subpart MMM (this table) specifies the applicability of each paragraph in subpart A to sources subject to subpart MMM.
Sec. 63.1(c)(2)	No	Area sources are not subject to subpart MMM.
Sec. 63.1(c)(3)	N/A	Reserved.
Sec. 63.1(c)(4)-(5)	Yes	
Sec. 63.1(d)	N/A	Reserved.
Sec. 63.1(e)	Yes	
Sec. 63.2	Yes	Additional terms are defined in Sec. 63.1361; when overlap between subparts A and MMM occurs, subpart MMM takes precedence.
Sec. 63.3	Yes	Other units used in subpart MMM are defined in that subpart.
Sec. 63.4(a)(1)-(3)	Yes	
Sec. 63.4(a)(4)	N/A	Reserved.
Sec. 63.4(a)(5)-(c)	Yes	
Sec. 63.5(a).	Yes.	Except the term "affected source" shall apply instead of the terms "source" and "stationary source" in Sec. 63.5(a)(1) of subpart A.
Sec. 63.5(b)(1)	Yes	
Sec. 63.5(b)(2)	N/A	Reserved.
Sec. 63.5(b)(3)-(5)	Yes	
Sec. 63.5(b)(6)	No	Sec. 63.1360(g) specifies requirements for determining applicability of added PAI equipment.
Sec. 63.5(c)	N/A	Reserved.
Sec. 63.5(d)-(e)	Yes	
Sec. 63.5(f)(1)	Yes	Except "affected source" shall apply instead of "source" in Sec. 63.5(f)(1) of subpart A.
Sec. 63.5(f)(2)	Yes	
Sec. 63.6(a)	Yes	
Sec. 63.6(b)(1)-(2)	No	Sec. 63.1364 specifies compliance dates.
Sec. 63.6(b)(3)-(4)	Yes	
Sec. 63.6(b)(5)	Yes	
Sec. 63.6(b)(6)	N/A	Reserved.
Sec. 63.6(b)(7)	Yes	
Sec. 63.6(c)(1)-(2)	Yes	Except "affected source" shall apply instead of "source" in Sec. 63.6(c)(1)-(2) of subpart A.
Sec. 63.6(c)(3)-(4)	N/A	Reserved.
Sec. 63.6(c)(5)	Yes	
Sec. 63.6(d)	N/A	Reserved.

Table 1 (continued)

Reference to subpart A	Applies to subpart MMM	Explanation
Sec. 63.6(e)	Yes	Except Sec. 63.1360 specifies that the standards in subpart MMM apply during startup and shutdown for batch processes; therefore, these activities would not be covered in the startup, shutdown, and malfunction Plan.
Sec. 63.6(f)	Yes	Except Sec. 63.1360 specifies that the standards in subpart MMM also apply during startup and shutdown for batch processes.
Sec. 63.6(g)	Yes	An alternative standard has been proposed; however, affected sources will have the opportunity to demonstrate other alternatives to the Administrator.
Sec. 63.6(h)	No	Subpart MMM does not contain any opacity or visible emissions standards.
Sec. 63.6(i)(1)	Yes	
Sec. 63.6(i)(2)	Yes	Except ``affected source" shall apply instead of ``source" in Sec. 63.6(i)(2)(i) and (ii) of subpart A.
Sec. 63.6(i)(3)-(14)	Yes	
Sec. 63.6(i)(15)	N/A	Reserved.
Sec. 63.6(i)(16)	Yes	
Sec. 63.6(j)	Yes	
Sec. 63.7(a)(1)	Yes	
Sec. 63.7(a)(2)(i)-(vi)	Yes	Sec. 63.1368 specifies that test results must be submitted in the Notification of Compliance Status due 150 days after the compliance date.
Sec. 63.7(a)(2)(vii)-(viii)	N/A	Reserved.
Sec. 63.7(a)(2)(ix)-(c)	Yes	
Sec. 63.7(d)	Yes	Except ``affected source" shall apply instead of ``source" in Sec. 63.7(d) of subpart A.
Sec. 63.7(e)(1)	Yes	Sec. 63.1365 contains test methods specific to PAI sources.
Sec. 63.7(e)(2)	Yes	
Sec. 63.7(e)(3)	Yes	Except Sec. 63.1365 specifies less than 3 runs for certain tests.
Sec. 63.7(e)(4)	Yes	
Sec. 63.7(f)	Yes	
Sec. 63.7(g)(1)	Yes	Except Sec. 63.1368(a) specifies that the results of the performance test be submitted with the Notification of Compliance Status report
Sec. 63.7(g)(2)	N/A	Reserved.
Sec. 63.7(g)(3)	Yes	
Sec. 63.7(h)	Yes	
Sec. 63.8(a)(1)-(2)	Yes	
Sec. 63.8(a)(3)	N/A	Reserved.
Sec. 63.8(a)(4)	Yes	
Sec. 63.8(b)(1)	Yes	
Sec. 63.8(b)(2)	No	Sec. 63.1366 specifies CMS requirements.
Sec. 63.8(b)(3)-(c)(3)	Yes	Except the submittal date of the immediate startup, shutdown, and malfunction reports for CMS events shall be 2 days as in Sec. 63.6(e)(3)(iv).
Sec. 63.8(c)(4)	No	Sec. 63.1366 specifies monitoring frequencies.
Sec. 63.8(c)(5)-(8)	No	
Sec. 63.8(d)-(f)(3)	Yes	
Sec. 63.8(f)(4)	Yes	Except Sec. 63.1368(b) specifies that requests may also be included in the Precompliance report.

Table 1 (continued)

Reference to subpart A	Applies to subpart MMM	Explanation
Sec. 63.8(f)(5)	Yes	
Sec. 63.8(f)(6)	No	Subpart MMM does not require CEM's.
Sec. 63.8(g)	No	Sec. 63.1366 specifies data reduction procedures.
Sec. 63.9(a)-(d)	Yes	
Sec. 63.9(e)	No	
Sec. 63.9(f)	No	Subpart MMM does not contain opacity and visible emission standards.
Sec. 63.9(g)	No	
Sec. 63.9(h)(1)	Yes	
Sec. 63.9(h)(2)(i)	Yes	Except Sec. 63.1368(a)(1) specifies additional information to include in the Notification of Compliance Status report.
Sec. 63.9(h)(2)(ii)	No	Sec. 63.1368 specifies the Notification of Compliance Status report is to be submitted within 150 days after the compliance date.
Sec. 63.9(h)(3)	Yes	
Sec. 63.9(h)(4)	N/A	Reserved.
Sec. 63.9(h)(5)-(6)	Yes	
Sec. 63.9(i)	Yes	
Sec. 63.9(j)	No	63.1368(h) specifies procedures for notification of changes.
Sec. 63.10(a)-(b)(1)	Yes	
Sec. 63.10(b)(2)	No	Sec. 63.1367 specifies recordkeeping requirements.
Sec. 63.10(b)(3)	Yes	
Sec. 63.10(c)	Yes	
Sec. 63.10(d)(1)	Yes	
Sec. 63.10(d)(2)	Yes	
Sec. 63.10(d)(3)	No	Subpart MMM does not include opacity and visible emission standards.
Sec. 63.10(d)(4)	Yes	
Sec. 63.10(d)(5)	Yes	Except that actions and reporting for batch processes do not apply during startup and shutdown.
Sec. 63.10(e)(1)-(2)(i)	Yes	
Sec. 63.10(e)(2)(ii)	No	Subpart MMM does not include opacity monitoring requirements.
Sec. 63.10(e)(3)	Yes	
Sec. 63.10(e)(4)	No	Subpart MMM does not include opacity monitoring requirements.
Sec. 63.10(f)	Yes	
Sec. 63.11-Sec. 63.15	Yes	

IX. Appendix E: DNR Air Quality Policy 3-b-08, Opacity Limits

1998 NOV 13 4

IOWA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

POLICY/PROCEDURE STATEMENT

TOPIC: <u>Opacity Limits</u>

Policy Procedure Number: 3-b-08

Replaces Number: None

Date:

Effective Date: November 12, 1998

Preparer: David Phelps

Reviewer:

Approval: **Bureau Chief:** Peter Hamlin

Date: 11/12/98

Division Administrator: Allan Stokes

Date: 11/12/98

Applicable Code of Iowa or Iowa Administrative Code Rule: 23.3(2)d

“No person shall allow, cause or permit the emission of visible air contaminants into the atmosphere from any equipment, internal combustion engine, premise fire, open fire or stack, equal to or in excess of 40 percent opacity or that level specified in a construction permit, except as provided below and in 567-Chapter 24.”

REASON OR BACKGROUND

The default opacity limit allowed by regulation is 40%. This limit was established with the original regulations in 1970. It is generally accepted that opacity greater than 40% was evidence of a mass emission standard exceedence. More recently, there have been requests from facilities for limits much lower than that allowed by the regulations, in some cases less than 0.01 gr/scf to which a 40% opacity limit does not correspond. Since opacity is used as an indicator of the particulate emission rate, listing an indicated potential problem opacity that is more in line with the mass emission rate is useful. In order to have the authority to set limits lower than 40%, subrule 23.3(2)d was changed. This change allows the department the ability to set opacity limits at a level that more closely corresponds to what would be observed by the source when operating in compliance with its mass emission rate.

Except in the case where a specific opacity limit is established by rule, it has been the general policy of the Department not to take action on opacity limits directly. Rather, if it is felt that a violation of the mass emission rate exists that is not attributable to some abnormal event, a stack test would be required to verify compliance. However, the Department reserves the right to use the results of formal opacity readings as evidence of an exceedence.

DETAILS

It shall be the policy of the Department to list the default opacity as a permit condition and in addition an indicator opacity may be listed.

For ease of proving continual compliance a source may request a 'no visible emissions' opacity limit which allows proof of compliance without having a certified opacity reading taken. In this case any visible emissions would be an exceedence.

The IDNR permit writer may list an opacity that will be a indicator of possible mass emission rate exceedence. If the permittee wishes, the recommended indicator opacity may be changed by demonstrating compliance with the mass emission rate during a stack test while emitting the new desired indicator opacity. If the tested mass emission rate is less than the permitted emission rate, then the desired indicator opacity may be set at a proportionally higher level than observed during the stack test.

If an opacity measurement, taken in accordance with an approved reference method for opacity, (generally USEPA Method 9 or 22) exceeds the indicator opacity then the facility will promptly investigate the source and make corrections. However, if after corrections are made the opacity continues to exceed the indicator opacity the Department may require additional proof to demonstrate compliance with the mass emissions limits.

Recommended indicator opacities shall be:

Grain Loading gr./scf	Recommended Indicator Opacity
<0.01 gr./scf	non specified in permit *
0.01 to 0.06 gr./scf	10% Opacity
0.061 to 0.08 gr./scf	20% Opacity
0.081 to 0.1 gr./scf	25% Opacity

* A line is added to the permit that states: "If visible emissions are observed other than start-up, shut-down, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard."

If a source is a batch process the indicator opacity shall be based on the table above, but the opacity averaging period, for comparison to the indicator opacity, shall be the entire batch cycle. For purposes of comparison the indicator opacity readings shall be taken during the entire cycle and averaged.

Sources are also given the opportunity to set source specific limits to be coordinated with the initial compliance test. These may then be incorporated into the permit.

In all cases an exceedence of the indicator opacity will require the permittee to file an "indicator opacity exceedence report" to the IDNR regional office. The reporting requirements shall be:

Oral report of excess indicator opacity. An incident of excess indicator opacity (other than an incident of excess indicator opacity during a period of startup, shutdown, or cleaning) shall be reported to the appropriate regional office of the department within eight hours of, or at the start of the first working day following the onset of the of the incident. The reporting exemption for an incident of excess indicator opacity during startup and shutdown or cleaning does not relieve the owner or operator of a source with continuous monitoring equipment of the obligation of submitting reports required in subrule 25.1(6).

An oral report of excess indicator opacity is not required for a source with operational continuous monitoring equipment (as specified in subrule 25.1(1) if the incident of excess indicator opacity continues for less than 30 minutes and does not exceed the applicable visible emission standard by more than 10 percent opacity.

The oral report may be made in person or by telephone and shall include as a minimum the following:

- a) The identity of the equipment or source operation from which the excess indicator opacity originated and the associated stack or emission point.
- b) The estimated quantity of the excess indicator opacity.
- c) The time and expected duration of the excess indicator opacity.
- d) The cause of the excess indicator opacity.
- e) The steps being taken to remedy the excess indicator opacity.
- f) The steps being taken to limit the excess indicator opacity in the interim period.

Written report of excess indicator opacity. A written report of an incident of excess indicator opacity shall be submitted as a follow-up to all required oral reports to the department within seven (7) days of the onset of the upset condition, and shall include as a minimum the following:

- a) The identity of the equipment or source operation point from which the excess emission originate and the associated stack or emission point.
- b) The estimated quantity of the excess indicator opacity.
- c) The time and duration of the excess indicator opacity.
- d) The cause of the excess indicator opacity.
- e) The steps that were taken to remedy and to prevent the recurrence of the incident of excess indicator opacity.
- f) The steps that were taken to limit the excess indicator opacity.
- g) If the owner claims that the excess indicator opacity was due to malfunction, documentation to support this claim.

Exceptions to this policy:

- 1) In the case where a facility has an opacity limit established in an existing permit, no change will be made to that permit limit unless the permit is being modified for other purposes.
- 2) If the facility has a continuous opacity monitor, this policy shall not apply.
- 3) This policy shall not apply to opacity limits established in Prevention of Significant Deterioration (PSD) permits or permits that were established for maintenance plans for nonattainment areas.
- 4) This policy shall not apply where an opacity limit is established as an indication of hazardous air pollutants.

- 5) This policy shall not apply where an opacity limit is established by a rule, New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAPS), etc.

**X. Appendix F: Monsanto Company Precompliance Plan,
40 CFR 63 Subpart MMM**

MONSANTO



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September 23, 2003

Ms. Catharine Fitzsimmons, Director
Air Quality Bureau
Iowa Department of Natural Resources
7900 Hickman Road, Suite 1
Urbandale, Iowa 50322

RE: Precompliance Plan Under 40 CFR 63 Subpart MMM -
National Emission Standards for Pesticide Active Ingredient Production

Dear Ms. Fitzsimmons:

This Precompliance Plan is being submitted for Monsanto Company's Muscatine, Iowa facility. The facility is an existing source with three production areas that manufacture pesticide active ingredients that are subject to the NESHAP for Pesticide Active Ingredient Production, 40 CFR Part 63, Subpart MMM. This plan is being submitted in accordance with 40 CFR 63.1368(e).

If you have any questions concerning this plan, please contact Julie Peshkin at (563) 262-5607.

Sincerely,

Oscar Berryman
Plant Manager

Enclosure

cc: Mr. Art Spratlin, Director, Air and Toxics Division, USEPA Region VII

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SEP 24 2003

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SEP 24 2003

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LIST OF ATTACHMENTS

Attachment A	<i>Summary of Equations for BDK Emissions Calculations</i>
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INTRODUCTION

Monsanto Company (Monsanto) owns and operates a pesticide manufacturing facility (the "facility") located in Muscatine, Iowa. The facility manufactures pesticide intermediates and active ingredients and formulates and packages the active ingredients to produce finished pesticide products. The facility is subject to the NESHAP for Pesticide Active Ingredient Production, 40 CFR Part 63, Subpart MMM (PAI MACT). The PAI MACT was promulgated on June 23, 1999, and modified on September 20, 2002. The compliance date for the PAI MACT is December 23, 2003.

The facility is an existing source with three pesticide active ingredient (PAI) production areas subject to this standard:

- A-Unit
- Multipurpose (MP)
- Glyphosate Technical (GT)

Previous submittals under the PAI MACT include:

- Initial Notification (October 19, 1999)
- Updated Initial Notification (March 5, 2002)

As stated in the preamble to the final rule, the general purpose of the Precompliance Plan is to provide "initial background information about the process being controlled, the types of emissions associated with the process, corresponding control equipment, and the monitoring parameters that have been or will be correlated to the process equipment." Specific requirements of the plan under 40 CFR 63.1368(e) include the following:

1. Requests for approval to use alternative monitoring parameters or requests to set monitoring parameters according to §63.1366(b)(4).
2. Descriptions of the daily or per batch demonstrations to verify that control devices subject to §63.1366(b)(1)(i) are operating as designed.

3. Data and rationale used to support the parametric monitoring level(s) that are set according to §63.1366(b)(3)(ii)(B).
4. For owners and operators complying with the requirements of §63.1362(g), the pollution prevention demonstration summary required in §63.1365(g)(1).
5. Data and rationale used to support an engineering assessment to calculate uncontrolled emissions from process vents as required in §63.1365(c)(2)(ii).
6. For fabric filters that are monitored with bag leak detectors, an operation and maintenance plan that describes proper operation and maintenance procedures, and a corrective action plan that describes corrective actions to be taken, and the timing of those actions, when the particulate matter concentration exceeds the set point and activates the alarm.

Monsanto does not plan to use the pollution prevention alternative under 40 CFR 63.1362(g), nor are fabric filters used to control HAP particulate matter. Therefore, items 4 and 6 listed above are not applicable to the facility.

This Precompliance Plan is being submitted for the three PAI production areas at the facility in accordance with 40 CFR 63.1368(e). Section 2 contains the Precompliance Plan material for the A-Unit production area, Section 3 provides the Precompliance Plan for the MP production area and Section 4 contains the Precompliance Plan for the GT production area.

2.0

PRECOMPLIANCE PLAN FOR A-UNIT

2.1

OVERVIEW OF A-UNIT PRODUCTION AREA

The A-Unit produces three pesticide active ingredients (Alachlor, Acetochlor and Butachlor) in the acetanilide family of herbicides. In addition, four intermediates [2,6-diethylphenyl azomethine (Azo), 2-ethyl-6-methylphenyl azomethine (Eazo), 2-chloro-2,6-diethyl-N-(chloromethyl) acetanilide (CMA), and 2-chloro-N-(2'-ethyl-6'-methylphenyl)-N-(chloromethyl) acetanilide (ECMA)] and one by-product (ammonium chloride) are manufactured in the A-Unit. The active ingredients are transferred to other areas in the facility where they are formulated into finished products and packaged.

Production of acetanilides takes place in three steps. Step I consists of the continuous reaction of diethylaniline (DEA) or ethylmethylaniline (EMA) with 50% aqueous formaldehyde solution followed by batch distillation to produce Step I intermediate (Azo or Eazo). Step II is the batch reaction of Azo/Eazo and chloroacetyl chloride (CAC) to form CMA or ECMA. A relatively small quantity (less than 15% of the total produced) of the intermediate CMA is drummed and shipped offsite for further processing.

Step III is also a batch reaction; CMA/ECMA and alcohol (methanol, ethanol, or butanol) are reacted to produce the final herbicide product. Final product purification and drying is a continuous operation. The hydrochloric acid (HCl) generated in Step III is neutralized with ammonia, forming ammonium chloride salt. The aqueous salt solution is separated and dried in the NH_4Cl recovery process and the by-product is sold. Waste alcohol and water from Step III is continuously fed to a distillation column and the recovered alcohol is reused in the process.

HAP emissions from the A-Unit storage tanks and process vents primarily include 1,2-dichloroethane, methanol, formaldehyde, triethylamine (TEA), methyl chloride, ethyl chloride, and hydrochloric acid (HCl). Nine control devices, including water and caustic scrubbers, condensers, and an incinerator, are used in the A-unit to control HAP emissions.

In summary, the following four processes within the A-unit production area are regulated under the PAI MACT:

- Acetochlor (Steps I, II, III, and recovery activities)
- Alachlor (Step III and recovery activities)
- Butachlor (Step III and recovery activities)
- CMA (Steps I and II)

A summary of control devices and monitoring parameters (including requested alternate operating parameters) is provided in Table 2-A.

2.2

PLAN CONTENT

The following discussion outlines the elements of the Precompliance Plan that are applicable to the A-Unit, including any requests for alternate approaches and demonstrations to those specified in the MACT rule.

Table 2-B summarizes the anticipated compliance strategy for process vents at the facility.

Table 2-B. Summary of Anticipated Compliance Strategy for A-Unit Process Vents⁽¹⁾

Process	Organic HAPs	HCl/Cl ₂
Acetochlor Butachlor CMA Alachlor	<ol style="list-style-type: none"> 1. Reduce uncontrolled emissions from each process vent subject to 40 CFR 63.1362(b)(2)(ii)(A) by 98%. 2. Reduce uncontrolled emissions from the sum of all process vents (not including vents required to meet 98% control) by at least 90%. 	Reduce uncontrolled emissions from the sum of all process vents by at least 94% by weight

⁽¹⁾As an alternative compliance approach, the facility reserves the ability to meet the exemption thresholds by maintaining uncontrolled emissions of organic HAPs to less than 0.15 Mg/yr (330 lb/yr) or uncontrolled emissions of HCl/Cl₂ to less than 6.8 Mg/yr (15,000 lb/yr) from the sum of all process vents within any process. In addition, the facility may elect to meet the alternative standards by controlling emissions of organic HAPs or HCl/Cl₂ from individual vents to outlet concentrations less than or equal to 20 ppmv.

The A-Unit contains a complex system of process equipment with a combination of batch and continuous operations and multiple control devices, with some devices operating in series. The facility performed an extensive evaluation of each process to determine uncontrolled emissions, the performance of individual control devices under various operating scenarios, and the effects of the operation of the individual control devices under these scenarios on the overall reduction efficiency for the process.

Based on this evaluation, operating parameter limits for the control devices were established to ensure compliance with the process vent standards under worst-case conditions. The facility plans to use the same operating parameter limits for each of the four A-Unit PAI processes.

2.2.1 *Requests for approval to use alternative monitoring parameters or requests to set monitoring parameters according to §63.1366(b)(4)*

2.2.1.1 *Scrubber Flow*

The facility is requesting approval to use an alternate monitoring parameter for the following control device:

- Step II Scrubber (CE-13-503)

The primary purpose of this scrubber is to remove HCl after organic HAPs are removed in the two Step II Reactor Condensers. HCl is transferred from the vapor stream into a scrubbing liquid, which is neutralized with caustic. The scrubber is continuously fed with fresh water and intermittently fed with caustic based on a pH control system. Wastewater is purged based on level control of the tank.

For scrubbers, 40 CFR 63.1366(b)(1)(ii) calls for monitoring liquid flow rate or pressure drop. In addition, if caustic solution is used to remove acid emissions, the pH of the effluent scrubber liquid also must be monitored. Rather than monitoring scrubber liquid flow rate or pressure drop, the facility proposes to monitor pump amperage on the recirculation pump. Pump amperage is a direct measurement of how hard a pump is working and is thus directly related to the liquid flow rate. If the liquid flow decreases due to blockage, pump amperage will also decrease accordingly. The pump is a centrifugal pump and not a variable speed unit, and thus will normally operate at a continuous rate. The interlock system for the device will shut down the process if the pump amperage falls below the specified threshold (14 amps). This threshold was determined during a process safety evaluation and will be maintained during operation of the scrubber. The facility plans to monitor pH in the Step II Eductor Scrubber but is requesting an alternative to the monitoring frequency as discussed in the following subsection.

2.2.1.2

Scrubber pH

The facility is requesting approval to use an alternate sampling frequency for the following control devices:

- Step II Eductor Scrubber (CE-13-503)
- Azo Incinerator Scrubber (CE-13-S-3)

For scrubbers using caustic solutions, 40 CFR 63.1366(b)(1)(ii) calls for monitoring pH once per day. The facility maintains continuous pH monitoring systems on the caustic scrubbers listed above. The facility requests that compliance for minimum pH for these scrubbers be demonstrated based on a daily pH average with data recorded at least once every 15 minutes for the daily average pH. This average will give a more accurate and reliable measure of scrubber liquid pH. This proposed method is akin to the method required by the USEPA in the generic process vent standards for halogen reduction devices codified at 40 CFR 63, Subpart SS.

2.2.2

Descriptions of the daily or per batch demonstrations to verify that control devices subject to §63.1366(b)(1)(i) are operating as designed

The following two control devices in the A-Unit are used for vent streams containing total uncontrolled HAP emissions less than 0.91 Mg/yr (1 ton/yr):

- Dehydrator Condenser "A" (CE-13-1007)
- Dehydrator Condenser "B" (CE-13-1011)

These devices are the final condensers in two parallel vacuum jet systems. Each system contains a series of three condensers, with the first two condensers located up-stream of vacuum jets and serving as process condensers, by definition. The third condenser in each system is downstream of the last vacuum jet and serves as a control device. The control device condensers receive steam and process vapors from the last vacuum jet, condense the steam and process condensables to a hotwell, and discharge the vapors to the atmosphere through a vent pipe. Cooling tower water is used to continuously cool the condensers.

The facility proposes to measure the temperature of the condensate generated by each condenser in order to demonstrate proper operation of the devices. Because they are at equilibrium, the condensate temperature

should match the temperature of the vapor stream immediately after the condenser (prior to cooling within the vent stack). Modeling indicates that these condensers will provide sufficient control if they cool the incoming HAP emissions to less than 75°C. The facility may perform daily or per batch monitoring or elect to measure and record parameter levels at least once every 15 minutes and calculate averages over the appropriate interval.

2.2.3 *Data and rationale used to support the parametric monitoring level(s) that are set according to §63.1366(b)(3)(ii)(B)*

A summary of monitoring parameters and levels for all control devices is provided on Table 2-A. The following two control devices in the A-Unit are used for vent streams containing total uncontrolled HAP emissions greater than 10 tons/year:

- Step III Scrubber (CE-13-514)
- Azo Incinerator / Scrubber system (CE-13-534, CE-13-S-3)

In accordance with 40 CFR 63.1366(b)(3)(ii)(B), the operating parameter levels for these large control devices are discussed in the following sections.

2.2.3.1 *Step III Scrubber (CE-13-514)*

The Step III Scrubber primarily controls emissions from the Step III batch reactors. This scrubber also acts as a temporary control device to minimize HAP emissions when process off gas cannot be vented to the incinerator due to a malfunction.

When no sources are venting to the scrubber, the water flow is set at a "standby" rate in order to provide sufficient wetting of the packing material. Under venting conditions, the flowrate is set to operate above a minimum level based on the flow rate, 17 gallons per minute, in effect during a performance test conducted in August 2003.

2.2.3.2 *Azo Incinerator (CE-13-534)*

The Azo incinerator treats a vapor process off gas waste stream from the Step III process and vents from the alcohol recovery process. The vapors from the incinerator are then quenched and scrubbed in a Venturi

scrubber (CE-13-S-3, described below) before passing through a mist eliminator and exiting to the atmosphere.

According to 40 CFR 63.1366(b)(1)(vii), the facility must establish the minimum temperature of the gases exiting the combustion chamber of the Azo Incinerator as the site-specific operating parameter that must be measured and recorded at least once every 15 minutes to demonstrate ongoing compliance. Generally, the site-specific operating parameter is established during a performance test. However, the provisions of 40 CFR 63.1366(b)(3)(ii)(B) allow affected facilities to depart from parametric values measured during a performance test if engineering assessments or manufacturer's and EPA's own recommendations indicate that a different parameter level is appropriate.

In accordance with the provisions of 40 CFR 63.1366(b)(3)(ii)(B), the facility proposes a minimum temperature of 816°C (1500°F) as the appropriate parameter level for the combustion chamber temperature in the Azo incinerator. This temperature is consistent with EPA guidance and technical literature which indicates that a thermal incinerator operated with a minimum combustion chamber temperature of 816°C (1500°F) will achieve at least 98% reduction in volatile organic compound emissions. The facility will monitor combustion chamber temperature at least once every 15 minutes in order to demonstrate compliance with the process vent standard.

2.2.3.3

Azo Incinerator Scrubber (CE-13-S-3)

The Azo Incinerator Scrubber is designed to remove HCl from the incinerator vapor stream and then neutralize the HCl solution with caustic. Caustic is added to this system to ensure equipment integrity and minimize overall water use. By adding caustic, the HCl absorbed by the water is neutralized. Caustic turns the HCl absorbed in the water into NaCl, effectively removing HCl from the system.

Control of HCl emissions with this scrubber is not dependent on a particular pH range because HCl is extremely soluble in water. Technical literature documents that halogenated emission streams are readily soluble in water and can be absorbed without addition of caustic to achieve reductions sufficient to comply with MACT provisions. HCl is highly soluble in water, as established in the CRC Handbook of Chemistry

and Physics, as 56.1 grams per 100 cubic centimeters in hot water (60°C)ⁱ and 82.3 grams per 100 cubic centimeters in cold water. For practical purposes, 56.1 grams of HCl can be absorbed into 100 grams of water at 60°C. Based on empirical data, it is universally accepted that HCl is readily absorbed in water.

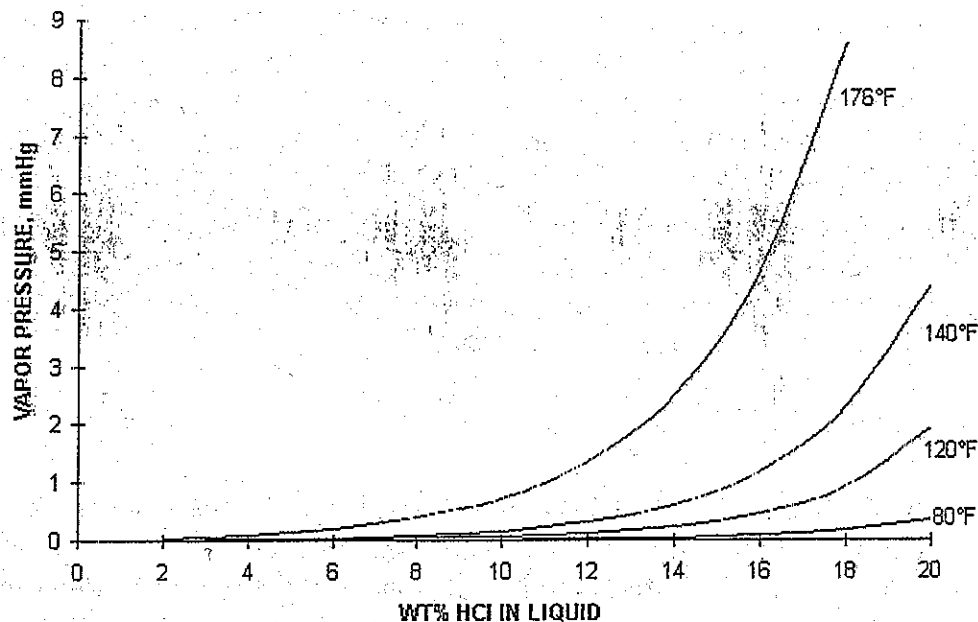
Absorption, or scrubbing, is an operation where gas is transferred to a nonvolatile liquid, typically water, containing less than the equilibrium concentration of the gas. The driving force for an absorption system is the difference between the equilibrium concentration of the pollutant with the scrubbing liquid, and the concentration of the pollutant in the gaseous stream. The higher the solubility of the pollutant in the liquid media, the more likely a pollutant will be scrubbed or removed from the gaseous phase and absorbed in the liquid.

Since HCl has such high water solubility, it will readily transfer into the liquid media, in particular to water at any pH. As Figure 2-1 illustrates, even at 176°F (80°C) and 10% by wt HCl, the vapor pressure over the solution is less than 1 mm Hg. Considering that a solution of pH of 1 contains less than 0.4% wt HCl, it follows that any HCl in the vapor state will be readily adsorbed even at very low pH levels.

Although the pH of the scrubbing liquid solution does not affect removal efficiency from the vapor stream, it is important to protect the equipment from excess corrosion. The facility has established a lower pH limit of 2 to ensure equipment can be maintained to operate in an efficient and safe manner, without concerns of equipment failure or destruction. Therefore, the facility will maintain a scrubber liquid pH above 2 to control HCl to comply with MACT provisions. The Azo Incinerator Venturi Scrubber pH control loop is set to control pH around 7, however, the normal range is between 4 and 11.

ⁱ 58th Edition, page B-117, Physical Constants of Inorganic Compounds.

Figure 2-1 - HCl/Water Equilibrium Data



- 2.2.4 *For owners and operators complying with the requirements of §63.1362(g), the pollution prevention demonstration summary required in §63.1365(g)(1)*

This part of the regulation is not applicable to the facility.

- 2.2.5 *Data and rationale used to support an engineering assessment to calculate uncontrolled emissions from process vents as required in §63.1365(c)(2)(ii)*

Uncontrolled emissions can be calculated by using the generic engineering equations (the "MACT equations") for batch operations listed in 63.1365(c)(2)(i), or by performing an engineering assessment in accordance with 63.1365(c)(2)(ii). In general, the facility may use either one of these approaches depending on the nature of the operation and the complexity of the emission episode. For continuous operations, the MACT equations are not applicable and an engineering assessment is required. Calculating emissions from the A-Unit solely using the MACT equations were not

feasible due to the complexity of the processes and the mixture of batch and continuous operations.

For engineering assessments, the facility utilized two commercial software packages in conjunction with process stream data and in some cases stack sampling data. For example, stack sampling data was used to assess the emissions entering control devices with multiple vents in order to allow refinement of the computer model. The facility used two process modeling software programs developed by Aspen Technology for emission calculations. The programs use standard chemical engineering principles to estimate chemical/physical properties and to perform material balances around unit operations. The software programs are described in the following sections.

2.2.5.1

Batch Design Kit (BDK)

Batch Design Kit (BDK) is a material balance program specifically designed for designing and optimizing batch operations. The program is equipped to track the material balance over the course of various process operations (vessel fills, transfers, heating, depressurizing, cooling, reactions, and separations) in systems with multiple vessels and varying batch times. Inputs to the program include the type of reactions taking place, the extent of each reaction, and separations that take place in each vessel. In some cases when venting occurred during a reaction, the facility developed a model of the reaction kinetics in order to provide accurate inputs into the BDK program.

BDK assumes ideal liquids and uses Raoult's law to determine the partial pressures of components in the system. Except for formaldehyde, vapor pressures are calculated as a function of temperature using Antoine coefficients. Because the vapor pressure of formaldehyde deviates significantly from an ideal liquid, an activity coefficient model was developed with activity coefficient data taken from "Formaldehyde," 3rd Edition, J.F. Walker, © 1975, Robert E. Krieger Publishing, New York.

Through the material balance, BDK determines the conditions inside the vessel during emission events and performs the emission calculations using the equations summarized in Attachment A. The BDK emission equations are either exactly equivalent to the default MACT equations, or are modified based on fundamental chemical engineering principles to provide more accurate results under certain conditions. For calculations

of batch operations, the use of BDK does not affect applicability determinations or classification of control devices.

2.2.5.2

Hysys

Hysys is a modeling program for continuous process operations. Hysys is designed to predict liquid-vapor phase separations in systems with complex thermodynamics and non-ideal fluids. In addition to using Raoult's Law, Hysys has the capability to use several equations of state and correlations for activity coefficients (e.g., Wilson, Peng-Robinson, NRTL, Chien-Null, Van Laar) to simulate non-ideal conditions. Hysys is especially suited for processes where the material balance is not already known or when the effect of process changes (such as temperature or pressure) is of interest.

The methodology for using Hysys normally includes the following steps:

- Build a Hysys model for a process activity or operation.
- Select the appropriate thermodynamic model based on the type of chemicals being modeled (alcohols, hydrocarbons, acids, etc.).
- Input known feed stream and process conditions (e.g., temperatures, pressures, flowrates, heat loads).
- Collect process stream and vent stream data to refine the simulated results.
- Adjust the model parameters so that the model results are consistent with field observations.

After model development and verification, Hysys is used for calculating uncontrolled and controlled emissions from vacuum jets and other continuous operations. In addition, Hysys is used for determining operating limits of control devices under worst-case scenarios. Parameters in the model are changed to generate a set of operating curves for control devices based on inlet stream composition and flowrate and operating parameter levels on the control device. The operating parameter limits reflect operation at the worst-case scenario (e.g., high non-condensable flow and high organic loading) while still maintaining the control required under the PAI MACT process vent standards.

2.2.6

Operation and maintenance plan and a corrective action plan for fabric filters

This part of the regulation is not applicable to the facility.

3.0

PRECOMPLIANCE PLAN FOR MULTIPURPOSE (MP) AREA

3.1

OVERVIEW OF MP PRODUCTION AREA

The MP production area produces three products on a campaign basis. Part of the year, the unit may produce propachlor, a PAI, and n-isopropylaniline (NIPA), an intermediate used in the propachlor process. At other times, the unit may produce MON 13900 (furilazole), a seed safener that is blended with acetochlor for use by Monsanto's Formulation facilities. MON 13900 is not a PAI. Propachlor and NIPA may be produced at the same time, but neither product can be made simultaneously with MON 13900.

Because the MP production area produces herbicides and has HAP emissions, it is subject to the PAI MACT. The PAI MACT affects sources in the propachlor and NIPA portions of the process, as NIPA is considered an integral intermediate. The PAI MACT also addresses units in which products other than pesticides may be made. Because MON 13900 production shares equipment with the propachlor process, the PAI MACT applies during MON 13900 production. Monsanto is including the entire MON 13900 process, including dedicated equipment, in its compliance plans for the area.

NIPA production is a two-step batch reaction process with associated purification and recovery. Aniline, hydrogen, and acetone are reacted in a catalyzed high-pressure reaction. Water is the main byproduct. When the reaction is essentially complete, the mixture is cooled and the catalyst is separated. The reaction product is separated into organic and aqueous phases. The organic layer is distilled in order to separate and recover excess acetone. NIPA is stored for use in propachlor production.

In the propachlor process, NIPA is reacted with chloroacetyl chloride (CAC) to produce crude product. The reaction produces hydrochloric acid (HCl); the HCl goes to absorbers and is ultimately neutralized in the on-site wastewater treatment plant. Excess CAC is stripped, collected, and recycled in subsequent batches. The reaction product is washed with water and neutralized with anhydrous ammonia and sodium hydroxide. The wash solution is decanted. The remaining liquid, Propachlor, is

vacuum dehydrated and stored prior to transfer to Monsanto's formulation facilities.

The NIPA and Propachlor processes have a total of seven control devices to control HAP emissions, including four condensers, two absorbers, and a scrubber. HAP emissions from the process include HCl, 1,2-dichloroethane, and aniline.

The MON 13900 process produces a "pre-mix" of MON 13900 in acetochlor technical for use in the Formulations areas. Production of MON 13900 is a multi-step process.

Step 1 reacts sodium hydroxide, nitromethane/furfural blend, and acetic acid to produce an intermediate, MON 5704. In Step 2, the Step 1 intermediate is reacted in methanol solvent with hydrogen under pressure in a catalyzed reaction to produce another intermediate, MON 5744. The product of Step 2 is refined in an evaporator for purification and solvent recovery. Step 3 takes the refined Step 2 product and reacts it with acetone to produce the intermediate MON 5777. In Step 4, the MON 5777 intermediate is reacted with dichloroacetyl chloride (DiCAC) to produce MON 13900. DiCAC contains the HAP trichloroethylene (TCE) as an impurity. Acetone is stripped from the product, water is added to crystallize it, and the washed MON 13900 crystals are dissolved in acetochlor technical prior to transfer to Monsanto's formulation facilities.

The MON 13900 process has six control devices to control HAP emissions, including five condensers and a water scrubber. HAP emissions from the process include methanol and TCE.

In summary, the following three processes within the MP production area are regulated under the PAI MACT:

- Propachlor
- NIPA
- MON 13900

A summary of control devices and monitoring parameters (including requested alternate operating parameters) is provided in Table 3-A.

PLAN CONTENT

The following discussion outlines the elements of the Precompliance Plan that are applicable to the MP production area, including any requests for alternate approaches and demonstrations to those specified in the MACT rule.

Table 3-B summarizes the anticipated compliance strategy for process vents at the facility.

Table 3-B. Summary of Anticipated Compliance Strategy for MP Process Vents⁽¹⁾

Process	Organic HAPs	HCl/Cl ₂
<i>Propachlor</i>	Reduce uncontrolled emissions from the sum of all process vents by at least 90% (no individual process vents are subject to the 98% control requirement)	Reduce uncontrolled emissions from the sum of all process vents by at least 94% by weight
<i>NIPA MON 13900</i>	Reduce uncontrolled emissions from the sum of all process vents by at least 90% (no individual process vents are subject to the 98% control requirement)	No emissions

⁽¹⁾As an alternative compliance approach, the facility reserves the ability to meet the exemption thresholds by maintaining uncontrolled emissions of organic HAPs to less than 0.15 Mg/yr (330 lb/yr) or uncontrolled emissions of HCl/Cl₂ to less than 6.8 Mg/yr (15,000 lb/yr) from the sum of all process vents within any process. In addition, the facility may elect to meet the alternative standards by controlling emissions of organic HAPs or HCl/Cl₂ from individual vents to outlet concentrations less than or equal to 20 ppmv.

The facility performed an extensive evaluation of each process to determine uncontrolled emissions, the performance of individual control devices under various operating scenarios, and the effects of the operation of the individual control devices under these scenarios on the overall reduction efficiency for the process. Based on this evaluation, operating parameter limits for the control devices were established to ensure compliance with the process vent standards under worst-case conditions. Operating parameter limits were established for each process.

3.2.1 *Requests for approval to use alternative monitoring parameters or requests to set monitoring parameters according to §63.1366(b)(4)*

3.2.1.2 *Condensers*

The facility is requesting approval to use alternate monitoring parameters for the following control devices:

- Autoclave Condensers (CE-9-0605, CE-9-0609) – MON 13900 process

As allowed under 40 CFR 63.1366(b)(3)(iii)(B), the facility intends to establish separate parameter levels for different batch emission episodes during operation of the autoclaves for MON 13900 production.

During the batch reaction cycle (hydrogen purge) and initial depressure, there is enough vapor moving through the vent line so that the vapor outlet temperature indication is truly representing the temperature. These two emission episodes account for approximately 86% of total uncontrolled emissions from the Autoclave batch cycle. During these episodes, the facility will monitor outlet vapor temperature, as called for by 40 CFR 63.1366(b)(1)(iii), and maintain the temperature below 10°F.

During the other emission episodes (initial fills and two small nitrogen purge depressurizations), the temperature monitoring device does not represent the true vapor temperature exiting the condenser. These emission episodes account for the remaining 14% of total uncontrolled emissions from the Autoclave batch cycle. At the onset of these episodes, vapor outlet temperature begins to decrease from ambient temperature but the emission episode is completed prior to the vapor temperature reading the true value. However, the condenser is providing sufficient control of organic HAPs even though the outlet temperature monitoring data is biased high.

Purging the vessel with nitrogen is an example of this situation. During a nitrogen purge, the autoclave is pressurized with nitrogen in order to remove any residual hydrogen. The nitrogen is injected through the vent line from the condenser (and over the outlet temperature probe), back into the autoclave. Consequently, during depressurization, the temperature monitoring device initially reads the temperature of the nitrogen within the vent line rather than the temperature of vapors venting through the condenser. The organic HAP vapors are cooled to a temperature below

10°F by the condenser, but the outlet vapor temperature reading spikes up above 10°F due to the nitrogen in the vent line.

After the vessel is purged with nitrogen, material for the next batch is charged. Each fill takes place over a matter of minutes, and the outlet temperature reading drops during the fill. However, the emission event is completed before the outlet temperature indication has time to read the true vapor outlet temperature.

During all emission events in the Autoclave, the condenser is operated with chilled glycol on the condenser shell at less than 5°F. Methanol is the only HAP in the system during the emission events, and methanol boils at 147°F. Vapor load on the condenser is greatest during the reaction (or Hydrogen purge) cycle and initial depressure where approximately 200 mol/minute of material is vented through the condenser. The other emission events have vent rates of less than 50 mol/min.

As an alternate parameter, the facility proposes to monitor the temperature of the coolant (chilled glycol), rather than vapor outlet temperature, during batch emission episodes other than the batch reaction cycle and initial depressure. The coolant temperature indicates that the chiller system is operating properly and the condenser is operating as designed.

3.2.1.2

Scrubber pH

The facility is requesting approval to use an alternate sampling frequency for the following control device:

- Caustic Scrubber (CE-9-0903) – Propachlor Process

For scrubbers using caustic solutions, 40 CFR 63.1366(b)(1)(ii) calls for monitoring pH once per day. The facility operates a continuous pH monitoring system on the caustic scrubber listed above. The facility requests that compliance for minimum pH for this scrubber be demonstrated based on a daily average rather than once per day readings in order to obtain a more accurate and reliable measure of scrubber liquid pH. This proposed method is akin to the method required by the USEPA in the generic process vent standards for halogen reduction devices codified at 40 CFR 63, Subpart SS.

3.2.2

Descriptions of the daily or per batch demonstrations to verify that control devices subject to §63.1366(b)(1)(i) are operating as designed

The following control devices in the MP production area are used for vent streams containing total uncontrolled HAP emissions less than 0.91 Mg/yr (1 ton/yr):

- Autoclave Condensers (CE-9-0605, CE-9-0609) – NIPA process
- Autoclave Receiver Condensers (CE-9C-5, CE-9C-6) – MON 13900 and NIPA processes
- MON 5744 Receiver Condenser (CE-9-0516) – MON 13900 process
- Scrubber (CE-9-0903) – NIPA process

For the condensers listed above, the facility proposes to monitor the temperature of the coolant entering the condensers. The parameter limits for each device and process are shown on Table 3-A. These limits were developed based on emissions calculations using the default MACT equations, and determining the level of control required to meet the process vent standard for each process.

The NIPA Autoclave Condensers and Autoclave Receiver Condensers are used to control aniline. The proposed maximum coolant temperature for these condensers is 55°F, which is considerably lower than the boiling point (363°F) of aniline and will ensure sufficient control by the condensers.

The MON 13900 Autoclave Receiver Condensers and MON 5744 Receiver Condenser are used to control methanol. The proposed maximum coolant temperature for these condensers is 10°F, which is considerably lower than the boiling point (147°F) of methanol and will ensure sufficient control by the condensers.

For scrubber operation during the NIPA process, the facility proposes to monitor fresh water and recirculating water flow rate. The parameter limits are shown on Table 3-A. These limits were developed based on emissions calculations using the Hysys process simulation software (see Section 2.2.2) and the level of control required to meet the process vent standard for the NIPA process.

To be consistent with process variables being monitored for other control devices, the facility proposes to measure and record parameter levels at

least once every 15 minutes during venting stages and calculate averages over the appropriate interval.

3.2.3

Data and rationale used to support the parametric monitoring level(s) that are set according to §63.1366(b)(3)(ii)(B)

A summary of monitoring parameters and levels for all control devices is provided on Table 3-A. The following control devices in the MP production area are used for vent streams containing total uncontrolled HAP emissions greater than 10 tons/year:

- Autoclave Condensers (CE-9-0605, CE-9-0609) – MON 13900 process
- Step II Reactor Absorber (CE-9D-30A) – Propachlor process
- Caustic Scrubber (CE-9-0903) – Propachlor process

The Autoclave Condensers are large control devices for the MON 13900 process, but condensers do not require a performance test; therefore, no information regarding parametric monitoring levels is required in this Precompliance Plan. In accordance with 40 CFR 63.1366(b)(3)(ii)(B), the operating parameter levels for the Step II Reactor Absorber and Caustic Scrubber for the Propachlor process are discussed in the following sections.

3.2.3.1

Step II Reactor Absorber (CE-9D-30A) – Propachlor Process

In the Propachlor process, the Step II Reactor Absorber is designed to control HCl emissions from the Step II Reactor. Vapors leaving this absorber are vented to the Caustic Scrubber (described below) for additional control of HCl emissions and control of organic HAP emissions.

The facility has used Hysys process simulation software (see Section 2.2.2) to determine the predicted minimum liquid flowrate for the Step II Reactor Absorber to achieve the level of control required to meet the process vent standard for the Propachlor process. The facility plans to conduct a performance test on this process before the due date for the Notification of Compliance Status Report.

3.2.3.2 *Caustic Scrubber (CE-9-0903) – Propachlor Process*

As described above, the Caustic Scrubber is designed to provide additional control of HCl emissions and control of organic HAP emissions following the Step II Reactor Absorber in the Propachlor process. It is also used to control HCl and OHAP emissions from multiple other sources in the process. This scrubber is used during the MON 13900 and NIPA process (as a small control device), but caustic is not added to the scrubbing liquid.

The facility has used Hysys process simulation software (see Section 2.2.2) to determine the predicted minimum liquid flowrate for the Caustic Scrubber to achieve the level of control required to meet the process vent standard for the Propachlor process. The facility plans to conduct a performance test on this process before the due date for the Notification of Compliance Status Report. In addition to liquid flowrate, the facility will monitor and establish a parameter limit for pH in the scrubbing liquid. The Caustic Scrubber for the Propachlor process is designed to remove HCl from the vapor stream and then neutralize the HCl solution with caustic. Caustic is added to this system to ensure equipment integrity and minimize overall water use. As discussed in Section 2.2.3.3, control of HCl emissions with this scrubber is not dependent on a particular pH range because HCl is extremely soluble in water.

The facility has established a lower pH limit of 2 to ensure equipment can be maintained to operate in an efficient and safe manner, without concerns of equipment failure or destruction. Therefore, the facility will maintain a scrubber liquid pH above 2 to control HCl to comply with MACT provisions. The Caustic Scrubber pH control loop is set to control pH around 7, however, the normal range is between 3 and 11.

3.2.4 *For owners and operators complying with the requirements of §63.1362(g), the pollution prevention demonstration summary required in §63.1365(g)(1)*

This part of the regulation is not applicable to the facility.

3.2.5

Data and rationale used to support an engineering assessment to calculate uncontrolled emissions from process vents as required in §63.1365(c)(2)(ii)

Uncontrolled emissions can be calculated by using the generic engineering equations (the "MACT equations") for batch operations listed in 63.1365(c)(2)(i), or by performing an engineering assessment in accordance with 63.1365(c)(2)(ii). In general, the facility may use either one of these approaches depending on the nature of the operation and the complexity of the emission episode. For continuous operations, the MACT equations are not applicable and an engineering assessment is required.

For engineering assessments, the facility utilized two commercial software packages in conjunction with process stream data and in some cases stack sampling data. For example, stack sampling data was used to assess the emissions entering control devices with multiple vents in order to allow refinement of the computer model. The facility used two process modeling software programs developed by Aspen Technology for emission calculations. The programs use standard chemical engineering principles to estimate chemical/physical properties and to perform material balances around unit operations. The software programs are described earlier in Section 2.2.2.

3.2.6

Operation and maintenance plan and a corrective action plan for fabric filters

This part of the regulation is not applicable to the facility.

4.0

PRECOMPLIANCE PLAN FOR GLYPHOSATE TECH (GT) AREA

4.1

OVERVIEW OF GT PRODUCTION AREA

The GT production area produces glyphosate salt, an herbicide active ingredient. Raw materials for the process are glyphosate intermediate (GI), oxygen, water, isopropyl amine, and potassium hydroxide. The main reaction step is the oxidation of a water slurry of GI in the presence of a catalyst. This step produces glyphosate technical solution. By-products of the reaction are formaldehyde and formic acid. The majority of these by-products are further oxidized to carbon dioxide and water, however residual amounts are emitted.

The reactor material is filtered for catalyst recovery. Filtrate from the filters is fed to the Evaporation System or Crystallizer System where water is removed to concentrate the solution. The concentrated glyphosate technical solution is centrifuged to yield a "wet cake." The wet cake can be packaged for off-site shipment or moved forward in the process for salt formation. Wet cake is reacted with isopropyl amine or potassium hydroxide solutions on a campaign basis to form glyphosate salt (amine or potassium-based). The salt solution is transferred to the Formulations area for blending and packaging into numerous finished herbicide products.

The GT process has two control devices, both scrubbers, to control HAP emissions. HAP emissions from the process are composed of formaldehyde.

In summary, the GT production area contains one process regulated under the PAI MACT. A summary of control devices and monitoring parameters is provided in Table 4-A.

4.2

PLAN CONTENT

The following discussion outlines the elements of the Precompliance Plan that are applicable to the GT production area, including any requests for alternate approaches and demonstrations to those specified in the MACT rule.

Table 4-B summarizes the anticipated compliance strategy for process vents at the facility.

Table 4-B. Summary of Anticipated Compliance Strategy for GT Process Vents⁽¹⁾

Process	Organic HAPs	HCl/Cl ₂
GT	Reduce uncontrolled emissions from the sum of all process vents by at least 90% (no individual process vents are subject to the 98% control requirement)	No emissions

⁽¹⁾As an alternative compliance approach, the facility reserves the ability to meet the exemption threshold by maintaining uncontrolled emissions of organic HAPs to less than 0.15 Mg/yr (330 lb/yr) from the sum of all process vents within any process. In addition, the facility may elect to meet the alternative standard by controlling emissions of organic HAPs from individual vents to outlet concentrations less than or equal to 20 ppmv.

The facility performed an extensive evaluation of this process to determine uncontrolled emissions, the performance of individual control devices under various operating scenarios, and the effects of the operation of the individual control devices under these scenarios on the overall reduction efficiency for the process. Based on this evaluation, operating parameter limits for the control devices were established to ensure compliance with the process vent standards under worst-case conditions.

4.2.1 Requests for approval to use alternative monitoring parameters or requests to set monitoring parameters according to §63.1366(b)(4)

No alternative monitoring parameters are requested for the GT process.

4.2.2 Descriptions of the daily or per batch demonstrations to verify that control devices subject to §63.1366(b)(1)(i) are operating as designed

No control devices in the GT process are subject to this demonstration.

4.2.3

Data and rationale used to support the parametric monitoring level(s) that are set according to §63.1366(b)(3)(ii)(B)

A summary of monitoring parameters and levels for all control devices is provided on Table 4-A. The following control device in the GT production area is used for vent streams containing total uncontrolled HAP emissions greater than 10 tons/year:

- Tech Reactor Scrubber (CE-4-0229)

In accordance with 40 CFR 63.1366(b)(3)(ii)(B), the operating parameter levels for the Tech Reactor Scrubber are discussed in the following section.

The Tech Reactor Scrubber is designed to control formaldehyde by using water as the scrubbing liquid. The GT process is a continuous operation.

The flowrate required to achieve a certain level of control is a function of the production rate, with a lower flowrate required for a lower production rate and a higher flowrate required for a higher production rate. Setting a constant minimum flowrate based on the maximum production rate would result in unnecessary and excessive water usage. Therefore, the facility plans to quantify the relationship between production rate and the required scrubber flowrate. Based on preliminary data, the facility has used Hysys process simulation software (see Section 3.5) to determine the minimum liquid flowrate for the Tech Reactor Scrubber to achieve the desired level of control over the range of throughput rates. The Hysys model for this process has been adjusted based on previous stack tests. Before the due date for the Notification of Compliance Status Report, the facility plans to conduct a performance test on this process at the maximum production rate and adjust the Hysys model based on the test results.

After adjusting the Hysys model, the facility will develop an equation relating production rate to the required scrubber flowrate, and program this equation into the control system for the GT process. The control system is capable of adjusting the scrubber flowrate immediately based on a change in production rate in order to ensure that the scrubber is achieving the level of control required to meet the process vent standard for the GT process.

4.3

For owners and operators complying with the requirements of §63.1362(g), the pollution prevention demonstration summary required in

§63.1365(g)(1)

This part of the regulation is not applicable to the facility.

4.4

Data and rationale used to support an engineering assessment to calculate uncontrolled emissions from process vents as required in §63.1365(c)(2)(ii)

Uncontrolled emissions can be calculated by using the generic engineering equations (the "MACT equations") for batch operations listed in 63.1365(c)(2)(i), or by performing an engineering assessment in accordance with 63.1365(c)(2)(ii). In general, the facility may use either one of these approaches depending on the nature of the operation and the complexity of the emission episode. For continuous operations, the MACT equations are not applicable and an engineering assessment is required.

For engineering assessments in the GT area, the facility utilized Hysys, a commercial software package, in conjunction with process stream data and in some cases stack sampling data. The Hysys software program was described earlier in Section 2.2.2.

4.5

Operation and maintenance plan and a corrective action plan for fabric filters

This part of the regulation is not applicable to the facility.

5.0

OTHER MISCELLANEOUS ITEMS

Although not required by the PAI MACT, the facility is advising the Agency in this section of the Precompliance Plan of its interpretation of miscellaneous items for which we believe clarification is required to assure MACT compliance. These clarifications are authorized by the Subpart A MACT General Provisions codified at 40 CFR 63.8. The items presented in this section are not specifically required by the regulation to be included in the Precompliance Plan; however, the facility considers their inclusion beneficial to the Agency for informational purposes. Unless requested by the Agency, the facility will not submit a second Subpart A petition, and expects that the Agency will process this section of the plan in accordance with 40 CFR 63.8(f).

5.1

Process Condensers

40 CFR 63.1365(c)(2)(i)(D)(3) requires an initial demonstration that vessels in which boiling occurs are operated with a properly operated process condenser, unless the process condenser is equipped with a secondary condenser which serves as a control device. According to the standard, the initial demonstration is to be performed by measuring the condenser exhaust gas temperature and showing it is less than the boiling point of the substance(s) in the vessel, or performing a material balance around the vessel and condenser to show that at least 99 percent of the material vaporized while boiling is condensed.

If the initial demonstration for process condensers is required, and the process condensers are not equipped with exhaust gas monitoring devices, the facility proposes to perform the demonstration by measuring condensate temperature in lieu of exhaust gas temperature. Because the condensate and exhaust gas are at equilibrium, the two temperatures will be equal. Cutting into a line under vacuum to measure gas temperature on a one-time basis is problematic because of Good Manufacturing Practice and contamination concerns. In addition, due to the complexity of the facility operations and limitations regarding the accuracy of level indicators, closing a material balance with sufficient precision to demonstrate 99% control is very uncertain.

Enhanced Wastewater Treatment

The facility operates an NPDES-permitted, aerobic wastewater treatment plant. Discharges to the wastewater treatment plant include waste streams generated in units that manufacture PAI and intermediates. Some of the wastewater contains Table 9 compounds (primarily methanol and TEA); several of these have been classified as Group 1 at the point of generation.

The facility's wastewater treatment plant is a biological "activated sludge" process. Biotreatment takes place in three aerators that utilize jet aeration to provide air and mixing. The aerators feed three clarifiers for biosolids separation and recycle back to the aerators. Treated water is passed through sand filters and activated carbon filters to remove residual solids and organics. The combined effluent from the activated carbon filters is discharged to the Mississippi River.

Several treatment options are available to assure compliance with the wastewater requirements. The facility will comply with 40 CFR 63.145(f), the required mass removal (RMR) option, for aerobic biological treatment processes. A treatment process that meets the conditions of 40 CFR 63.145(h)(1) is exempt from the requirement of completing a performance test. These criteria are:

- The biological treatment process meets the definition of "enhanced biological treatment process" in 40 CFR 63.111; and
- At least 99 percent by weight of all compounds on Table 36 of this subpart that are present in the aggregate of all wastewater streams using the biological treatment process to comply with 40 CFR 63.138 of this subpart are compounds on list 1 of Table 36.

The Table 9 compounds treated in the wastewater treatment plant are methanol, TEA, 1,2-dichloroethane, and methyl chloride. Methanol and TEA account for more than 99% by weight of the total Table 9 compounds that are treated in the WWTP.

The definition for "enhanced biological treatment system or enhanced biological treatment process" is found in §63.111. In addition, EPA has developed guidance to help a facility determine if they meet the criteria required to be classified as an enhanced biological treatment process (see

Technical Support Document for Evaluation of Thoroughly Mixed Biological Treatment Unit). These are:

- 1) Determine if the system recycles biomass and that the biomass concentration is greater than or equal to 1 kg / m³ MLVSS.
- 2) Verify that the system has the design characteristics that assure it is "thoroughly mixed" (Table 1 in the guidance).
- 3) Assure that the system has the required design characteristics for each parameter specified in Table 2 of the guidance.

It has been determined that the facility's wastewater treatment plant meets all these criteria.

The facility proposes to demonstrate continuous compliance with the wastewater standards by monitoring the following parameters on a daily basis:

- Influent flow to the wastewater treatment plant, MGD
- Aeration tank temperature, °C, and
- Aeration tank MLVSS, mg/L

SUMMARY

The details provided in this document satisfy the requirements associated with the Precompliance Plan as delineated in 40 CFR 63.1368(e). Additionally elements of this report address compliance options available to the facility in accordance with the provisions of 40 CFR 63.8 known as the MACT General Provisions. The facility recognizes that the Administrator has 90 days to approve or disapprove this plan.

The facility will notify the Administrator of any changes made to the information presented in this report at least 90 days prior to implementing the planned change.

TABLE 2-A
A-UNIT - SUMMARY OF AIR POLLUTION CONTROL DEVICES
MONSANTO COMPANY
MUSCATINE, IOWA

Process	Device	Status	63.1566 Parameter(s)	Alternative Parameter(s)	Proposed Parameter if < 1 ton/yr	Parameter Limits ⁽¹⁾	Basis for Parameter Limits
Acetochlor CMA	Azo Eductor Scrubber (with packed stack)	13-903, 13-1019	Water flow or pressure drop	N/A	N/A	>8 gpm scrubber water inlet	Hysys design evaluation
	Step II Reactor A Condenser	13-757	Vapor outlet temperature	N/A	N/A	<50 deg C	BDK Condenser Modeling
	Step II Reactor B Condenser	13-788	Vapor outlet temperature	N/A	N/A	<50 deg C	BDK Condenser Modeling
	Step II Scrubber	13-503	Water flow or pressure drop, and pH	Pump amperage	N/A	>14 Amps on recirculation pump; pH >2	Pump current draw when pumping compared to deadhead
Acetochlor Alachlor Butachlor	Step III Scrubber	13-514	Water flow or pressure drop	N/A	N/A	>17 gpm water to scrubber	Performance Demonstration
	Azo Incinerator / Scrubber System		Combustion chamber temperature	N/A	N/A	>1500 deg F	Performance Demonstration, literature and EPA guidance for combustion devices
	Incinerator	13-534	Water flow or pressure drop, and pH	N/A	N/A	Recirculation flow >80 gpm; pH >2	Performance Demonstration
	Scrubber	13-5-3	N/A	N/A	Condensate temperature	<75 deg C	Stack sampling, Hysys design evaluation
	Dehydrator Condenser "A"	13-1007	N/A	N/A	Condensate temperature	<75 deg C	Stack sampling, Hysys design evaluation
	Dehydrator Condenser "B"	13-1011	N/A	N/A			

Notes:

(1) Parameter limits are subject to change based on additional design evaluation.

Key:

Large Control Device (LCD) - Control device that controls process vents, and total HAP emissions into the control device from all sources are ≥ 10 tons/yr ($\geq 20,000$ lb/yr)

Small Control Device (SCD) - Control device that controls process vents, and total HAP emissions into the control device from all sources are < 10 tons/yr ($< 20,000$ lb/yr)

>98% - Subject to process vent standard at 40 CFR 63.1562(b)(2)(iii)(A)

gpm - gallons per minute

TABLE 3-A
MP - SUMMARY OF AIR POLLUTION CONTROL DEVICES
MONSANTO COMPANY
MUSCATINE, IOWA

Process	Device	Status	63.1366 Parameter(s)	Alternative Parameter(s)	Proposed Parameter if < 1 ton/yr	Parameter Limits ⁽¹⁾	Basis for Parameter Limits
MON13900	Autoclave Condenser	LCD	Vapor outlet temperature	Coolant temperature (during specified episodes)	N/A	Vapor outlet temperature <10 deg F during batch reaction cycle and initial depressure; coolant temperature <5 deg F during other batch emission episodes	MACT Condenser Equations, engineering assessment
	Autoclave Condenser	LCD	Vapor outlet temperature	Coolant temperature (during specified episodes)	N/A	Vapor outlet temperature <10 deg F during batch reaction cycle and initial depressure; coolant temperature <5 deg F during other batch emission episodes	MACT Condenser Equations, engineering assessment
	Autoclave Receiver	SCD and <1 ton/yr	N/A	N/A	Coolant temperature	<10 deg F coolant temperature	Engineering assessment
	Autoclave Receiver	SCD and <1 ton/yr	N/A	N/A	Coolant temperature	<10 deg F coolant temperature	Engineering assessment
	MON 5744 Receiver	SCD and <1 ton/yr	N/A	N/A	Coolant temperature	<10 deg F coolant temperature	Engineering assessment
	Condenser	SCD and <1 ton/yr	N/A	N/A	Coolant temperature	<10 deg F coolant temperature	Stack Sampling, Hysys design evaluation
	Scrubber	SCD	Water flow or pressure drop	N/A	N/A	Recirculation flow >30 gpm	Engineering assessment
	Autoclave Condenser	SCD and <1 ton/yr	N/A	N/A	Coolant temperature	<55 deg F coolant temperature	Engineering assessment
	Autoclave Condenser	SCD and <1 ton/yr	N/A	N/A	Coolant temperature	<55 deg F coolant temperature	Engineering assessment
	Autoclave Receiver	SCD and <1 ton/yr	N/A	N/A	Coolant temperature	<55 deg F coolant temperature	Engineering assessment
NIPA	Autoclave Receiver	SCD and <1 ton/yr	N/A	N/A	Coolant temperature	<55 deg F coolant temperature	Engineering assessment
	Condenser	SCD and <1 ton/yr	N/A	N/A	Coolant temperature	<55 deg F coolant temperature	Engineering assessment
	Scrubber	SCD and <1 ton/yr	N/A	N/A	Water flow	Recirculation flow >25 gpm	Hysys design evaluation
	Step II Reactor Absorber	LCD	Water flow or pressure drop	N/A	N/A	>30 gpm water flow	Hysys design evaluation, future performance demonstration
	CAC Stripper Absorber	SCD	pressure drop	N/A	N/A	>30 gpm water flow	Hysys design evaluation
	Caustic Scrubber	LCD	Water flow or pressure drop, and pH	N/A	N/A	Recirculation flow >25 gpm, pH >2	Hysys design evaluation, future performance demonstration
	Scrubber	SCD and <1 ton/yr	N/A	N/A	Water flow	Recirculation flow >25 gpm	Hysys design evaluation
	Step II Reactor Absorber	LCD	Water flow or pressure drop	N/A	N/A	>30 gpm water flow	Hysys design evaluation, future performance demonstration
	CAC Stripper Absorber	SCD	pressure drop	N/A	N/A	>30 gpm water flow	Hysys design evaluation
	Caustic Scrubber	LCD	Water flow or pressure drop, and pH	N/A	N/A	Recirculation flow >25 gpm, pH >2	Hysys design evaluation, future performance demonstration

Notes:
(1) Parameter limits are subject to change based on additional design evaluation.

Key:
Large Control Device (LCD) - Control device that controls process vents, and total HAP emissions into the control device from all sources are ≥ 10 tons/yr ($\geq 20,000$ lb/yr)
Small Control Device (SCD) - Control device that controls process vents, and total HAP emissions into the control device from all sources are <10 tons/yr (<20,000 lb/yr)
>98% - Subject to process vent standard at 40 CFR 63.1362(b)(2)(ii)(A)
gpm - gallons per minute

TABLE 4-A
GT - SUMMARY OF AIR POLLUTION CONTROL DEVICES
MONSANTO COMPANY
MUSCATINE, IOWA

Process	Device	Status	63.1366 Parameter(s)	Alternative Parameter(s)	Proposed Parameter if < 1 ton/yr	Parameter Limits ⁽¹⁾	Basis for Parameter Limits
GT Unit	Tech Reactor Scrubber	LCD	Water flow or pressure drop	N/A	N/A	Minimum flowrate as a function of production rate (to be determined)	Hysys design evaluation, stack sampling, future performance demonstration
	Process Fume Scrubber ⁽²⁾	SCD	Water flow or pressure drop	N/A	N/A	Minimum flowrate (to be determined)	Design evaluation

Notes:

(1) Parameter limits are subject to change based on additional design evaluation.

(2) This source is being evaluated to assure it meets the definition of "process vent" (it may be less than 50 ppm).

Key:

Large Control Device (LCD) - Control device that controls process vents, and total HAP emissions into the control device from all sources are ≥ 10 tons/yr ($\geq 20,000$ lb/yr)
 Small Control Device (SCD) - Control device that controls process vents, and total HAP emissions into the control device from all sources are < 10 tons/yr ($< 20,000$ lb/yr)
 >98% - Subject to process vent standard at 40 CFR 63.1362(b)(2)(ii)(A)
 gpm - gallons per minute

Appendix A

VOC Emissions Due to Material Transfer (EPA)

Emissions from vapor displacement due to transfer of material to a vessel are calculated by using Equation (1.1).

$$n_{VOC,i} = \frac{P_i^o x_i V}{RT} \quad (1.1)$$

where: $n_{VOC,i}$ = moles of VOC contributed by component i

P_i^o = vapour pressure of VOC, i at T

x_i = mole fraction of VOC, i in still

V = volume of gas displaced from the vessel

R = ideal gas law constant

T = temperature of the vessel vapor space: absolute

What do you need help with?

☒ VOC Emissions After Condenser

VOC Emissions Due to Sweeping

In order to calculate the VOC emissions associated with operations that involve sweeping, the vessel materials along with the inert gas (used in the sweep) are first divided into non-condensable and condensable materials. The amount of VOC from condensable material, n_{con} , is calculated using:

$$n_{VOC,i} = \frac{P_i^o x_i V_r}{RT}$$

where: $n_{VOC,i}$ = moles of VOC contributed by component i

T = temperature

R = ideal gas constant (in appropriate units)

x_i = mole fraction of VOC in still

P_i^o = vapour pressure of VOC at T

V_r = still volume of displaced material

Using the Ideal Gas Law, BDK calculates the total number of moles of gas displaced by inert material:

$$n_t = PV_r/RT$$

where: P = material pressure

V_r = volume taken by inert material

n_t = number of moles

R = gas constant

T = material temperature

The emission contribution from the non-condensable materials, n_{non} can be calculated as:

$$n_{VOC,i} = \frac{n_i(n_t - n_{con})}{n_{non}}$$

where: $n_{VOC,i}$ = moles of VOC contributed by component i

n_i = total moles of component i

VOC Emissions Due to Heating

A number of operations involve some type of heating. The resulting VOC emissions are calculated using a method similar to the one suggested by the EPA. At the initial temperature, T_1 , material is divided up into condensable and non-condensable material. The pressure of the non-condensable material at the initial and final temperature (T_2) is calculated as suggested by the EPA.

$$P_1 = P - \sum p_i^{\circ}(T_1)x_i$$

$$P_2 = P - \sum p_i^{\circ}(T_2)x_i$$

where: P = material pressure

P_1 = pressure of non-condensable material at initial temperature, T_1

P_2 = pressure of non-condensable material at final temperature, T_2

p_i° = vapour pressure of pure component i at material temperature and pressure

x_i = mole fraction of component i in condensed phase

The EPA calculation for the resulting number of moles of condensables, n_{con} , and non-condensables, n_{non} , is as follows:

$$n_{non} = \frac{V(P_1 - P_2)}{R(T_1 - T_2)}$$

$$n_{con} = \frac{1}{2} \left(\frac{\sum p_i^{\circ}(T_1)x_i}{P_1} + \frac{\sum p_i^{\circ}(T_2)x_i}{P_2} \right) n_{non}$$

where: V = free volume of the vessel

R = ideal gas constant

BDK uses an improved version of this model to give more accurate VOC calculations. Under the following conditions the above equation will not be used:

if $p_1 < 0$, all material is assumed to be in gas phase, then number of moles of condensable VOC emissions is:

$$n_{con} = \frac{T_2 - T_1}{T_2} (n - n_{non}^*)$$

if $p_1 > 0$ and $p_2 < 0$, the process is like heating a balloon. The volume taken by all material at the higher temperature is:

$$V_{max} = \frac{nRT_2}{P}$$

where: n = total moles of material

The number of moles of condensable material released is calculated as:

$$n_{con} = \frac{V_{max} - V}{V_{max}} (n - n_{non}^*)$$

where: n_{non}^* = moles of non-condensable material except air at T_1

The following method will be used for calculating the number of moles of VOC:

For a condensable component i :

$$n_{VOC,i} = \begin{cases} \frac{x_i P_i^s n_{con}}{\sum_j x_j P_j^s} & \text{if } n_i > \frac{x_i P_i^s n_{con}}{\sum_j x_j P_j^s} \\ n_i & \text{if } n_i < \frac{x_i P_i^s n_{con}}{\sum_j x_j P_j^s} \end{cases}$$

where: $n_{VOC,i}$ = moles of VOC contributed by component i

n_i = total moles of component i

For a non-condensable component i :

$$n_{VOC,i} = \frac{T_2 - T_1}{T_2} n_i$$

VOC Emissions Due to Depressuring

The Evacuate operation like other depressuring operations uses the general EPA method for VOC emission calculation. First the material is divided into condensables and non-condensables. The number of moles of non-condensables at both pressures are calculated:

$$n_{non,1} = V \left(P_1 - \sum_i x_i P_i^0 \right) / RT$$

$$n_{non,2} = V \left(P_2 - \sum_i x_i P_i^0 \right) / RT$$

where: P_1 = initial material pressure

P_2 = final material pressure

V = free volume of the vessel

R = ideal gas constant

x_i = mole fraction of component i in still volume

P_i^0 = vapour pressure of pure component i at material temperature and pressure

$n_{non,1}$ = moles of non-condensable material at P_1

$n_{non,2}$ = moles of non-condensable material at P_2

The number of moles of VOC are calculated as follows:

$$n_{con} = [n_{non,1} - n_{non,2}] \times \frac{(R_1 + R_2)}{2}$$

where: n_{con} = moles of condensable material in VOC

$$R_1 = \text{pressure ratio at } P_1 = \frac{\sum_i x_i P_i^0}{P_1 - \sum_i x_i P_i^0}$$

$$R_2 = \text{pressure ratio at } P_2 = \frac{\sum_i x_i P_i^0}{P_2 - \sum_i x_i P_i^0}$$

However, some modifications have been made to this model to account for instances where $n_{non,1} < 0$ or $n_{non,2} < 0$. In either of these instances all condensable material is assumed to be in the gas phase.

$$n_{con} = (P_1 - P_2) \times \frac{(n - n_{non}^*)}{P_1}$$

where: n = moles of material

n_{non}^* = moles of non-condensable material except air at P_1

The resulting moles of VOC can be estimated using the following relationship:

For a condensable component i :

$$n_{VOC,i} = \begin{cases} \frac{x_i P_1 n_{con}}{\sum_j x_j P_j} & \text{if } n_i > \frac{x_i P_1 n_{con}}{\sum_j x_j P_j} \\ n_i & \text{if } n_i < \frac{x_i P_1 n_{con}}{\sum_j x_j P_j} \end{cases}$$

where: $n_{VOC,i}$ = moles of VOC contributed by component i

n_i = total moles of component i

For a non-condensable component i :

$$n_{VOC,i} = \frac{P_1 - P_2}{P_1} n_i$$

VOC Vacuum Emissions

In order to calculate the amount of VOC emission that are released by a vacuum you need to provide the leak rate, time, vacuum pressure and receiver temperature. BDK then uses the following equation:

$$n = \left[\frac{(\text{Leak Rate} \times t)}{MW_{\text{air}}} \right] \times \frac{P_i}{(P_r - \Sigma P_i)}$$

where: n = moles of VOC material

Leak Rate = total air leak rate in the system (mass/time)

t = time

P_i = partial pressure of individual VOC at the receiver temperature

P_r = vacuum pressure

$MW_{\text{air}} = 29$

ΣP_i = summation of P_i

VOC Emissions After Condensing

Many operations and units allow for condensers to be used for reducing emissions. The following method is used to calculate VOC emissions after the condensing process.

At the condensing temperature (i.e. the condenser outlet temperature), material is divided into condensable and non-condensable material. Obviously the non-condensable materials will not be affected by the condensing process. However, the number of moles of material resulting from the condensation of condensable material will be calculated as shown below:

In order to calculate the amount of material condensed, the moles of gas at the condenser temperature, T_c , must first be calculated.

$$G = n_{air} + n_{non} + \sum_i \frac{p_i n y_i^o}{[P(N-G) + G p_i^o]}$$

where:

$$N = n_{air} + n_{non} + n_{con}$$

The first equation requires some form of iteration to be solved. However, for materials that consist of a single component, the relationship does simplify to the following:

$$p_i = \frac{p_i^o}{P}$$

and G can be determined as:

$$G = \frac{(n_{air} + n_{non})}{1 - \frac{p_i^o}{P}}$$

If the condensable material consists of more than one component, G is determined iteratively using the following target function:

$$F(G) = G \left(1 - \sum_i y_i \right) - n_{non} - n_{air}$$

where:

$$y_i = \frac{n y_i^o}{(N-G)P + G p_i^o}$$

The searching algorithm used is as follows:

if $(N - n_{non} - n_{air})/N < 0.01$, iteration is not required as $G = N$

if $n_{non} + n_{air} = 0$, then G will lie in the range: $0.001N \leq G \leq 0.99N$

Otherwise, G will lie in the range: $n_{air} + n_{non} \leq G \leq 0.99N$

The number of moles of VOC emissions contributed by the condensable component i after condensation is:

$$n_{VOC,i} = \frac{(G - n_{air} - n_{non})p_i^s x_i}{\sum_j p_j^s x_j}$$

MONSANTO



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May 12, 2004

Ms. Catharine Fitzsimmons, Director
Air Quality Bureau
Iowa Department of Natural Resources
7900 Hickman Road, Suite 1
Urbandale, Iowa 50322

RE: Supplement to Precompliance Plan dated September 23, 2003
National Emission Standards for Pesticide Active Ingredient Production,
40 CFR Part 63, Subpart MMM

Dear Ms Fitzsimmons:

Monsanto Company's Muscatine, Iowa facility is an existing source with three production areas that manufacture pesticide active ingredients that are subject to the NESHAP for Pesticide Active Ingredient Production, 40 CFR Part 63, Subpart MMM. Monsanto submitted the required precompliance plan on September 23, 2003. This supplement to the precompliance plan is being submitted in accordance with §63.1368(e).

The changes to the precompliance plan are summarized below and then described in more detail.

- Alternate monitoring parameters for four control devices:
 - Multipurpose Plant MON 13900 Autoclave Condenser: 9-0605
 - Multipurpose Plant MON 13900 Autoclave Condenser: 9-0609
 - GT Reactor Scrubber: 4-0229
 - GT Process Scrubber: 4-0785
- Documentation for an alternative emission calculation for vessel purging.
- Change the monitoring parameter limit for two small control devices at the A-Unit: the Dehydrator Condensers, 13-1007 and 13-1011.
- Reclassification of the A-Unit's Process Off-gas process vent during the Butachlor operating scenario.
- Change the HCl/Cl₂ compliance option for the Multipurpose Plant's (MP) Scrubber (01-0903) during Propachlor from 94% control efficiency to less than 20 ppmv on the control device outlet.
- Remove two wastewater treatment plant monitoring parameters that are not required: temperature and inlet flowrate.

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Control Device Alternate Monitoring Parameters

MP MON 13900 Autoclave Condensers (9-0605 and 9-0609)

Monsanto's compliance approach for the MON 13900 process is to reduce uncontrolled emissions from the sum of all process vents by at least 90%. Monitoring parameters for the Autoclave Condensers proposed by Monsanto in the original precompliance plan were:

- Maintain the condenser outlet temperature below 10°F during the batch reaction cycle (hydrogen purge) and initial depressuring.
- Maintain the condenser coolant temperature below 5°F during initial fills and two small nitrogen purge depressures.

Autoclave batches have a target operating temperature of 90°F. The Autoclave Condenser outlet temperature is monitored when there is enough vapor flow going through the control device; the outlet temperature currently has a fixed upper temperature limit of 10°F. However, as the autoclave batch temperature changes, the quantity of uncontrolled emissions sent to the condenser also changes. When batch temperatures are cooler, operating the condenser at the upper outlet temperature limit gives a lower percent control than at standard batch conditions. Conversely, when batch temperatures are warmer, operating the condenser at the outlet temperature upper limit gives a higher percent control than at standard batch conditions. With a change in batch temperature, the condenser outlet temperature also has to change to achieve similar percent control.

The following table illustrates the relationship between uncontrolled and controlled HAP emissions, batch temperature, and the differential temperature between the batch and condensers in the MON 13900 Autoclaves.

Autoclave batch temperature, °F	80	90	100	110
Condenser outlet temperature, °F	0	10	15	25
Batch - Condenser Delta T, °F	80	80	85	85
Uncontrolled emissions, lbs/MM lb	13,621	17,959	23,048	30,534
Controlled emissions, lbs/MM lb	1,045	1,569	1,904	2,794
Percent control	92.3%	91.3%	91.7%	90.9%

To ensure adequate emissions control at any batch temperature during the batch reaction cycle and initial depressuring, Monsanto proposes to establish the differential temperature between the batch and condenser outlet as an alternate monitoring parameter. This differential temperature (batch temperature minus the condenser outlet temperature) should be greater than or equal to 80°F when the batch is cooler than 100°F, and greater than or equal to 85°F when the batch is warmer than 100°F. No change is proposed for the monitoring parameter or monitoring parameter limit during initial fills and two small nitrogen purge depressures.

GT Reactor and Process Scrubbers (4-0229 and 4-0785)

Monsanto's compliance approach for GT production is to reduce uncontrolled emissions from the sum of all process vents by at least 90%. The Tech Reactor Scrubber and the Process Fume Scrubber together achieve the necessary control to meet the 90% standard for the GT process. In the original precompliance plan, Monsanto identified that minimum water flow rates would be maintained to ensure 90% control. The minimum scrubber water flow rates were not defined in the precompliance plan pending the results of the performance test and additional process modeling.

Based on the performance test results and process modeling, it has been determined that the average scrubber temperature (top temperature plus bottom temperature divided by two) is a more precise indicator of scrubber efficiency than water flowrate only because average scrubber temperature incorporates both water flow and HAP loading into a single variable. A higher production rate or increased HAP loading increases the total heat load into the scrubber (more hot gasses are sent to the scrubber), thus increasing the average temperature. To compensate for this, fresh make-up water flow must be increased to maintain temperature. More fresh water allows more formaldehyde to be absorbed, and cooler temperatures minimize formaldehyde that gets stripped by the non-condensable gases. When HAP loading and the total heat load into the scrubber decreases, 90% control can be maintained with reduced water flow which saves a considerable amount of water.

The compliance demonstration performance test on both scrubbers was conducted at the maximum average temperature for each device: 55°C for the Reactor Scrubber and 56°C for the Process Scrubber. Monsanto will comply with the process vent standard for the GT process by maintaining average temperatures at or below these levels.

Alternative emission calculation

Autoclave emission events for MON13900 and NIPA production at the MP unit have a hydrogen purge of greater than 100 scfm in the batch. Per §63.1365(c)(2)(i)(C), uncontrolled emissions when purging are assumed to be 25% of the saturated value when purge flows are greater than 100 scfm. In the Autoclaves, hydrogen is introduced through a dip-tube at the bottom of the vessel and bubbles up through the liquid. This process step is better defined as sparging rather than purging. Assigning a 25% saturation factor to this particular step, even though flow is greater than 100 scfm, underestimates the uncontrolled emissions generated in the sparging process. Because of this, a 100% saturation factor was used.

Change in a small control device monitoring parameter limit

The A-Unit process Dehydrator Condensers (13-1007 and 13-1011) are small control devices with less than 1 ton per year of uncontrolled HAP sent to each. In the original precompliance plan, Monsanto proposed to maintain the condensate temperature below 75°C. Because so little HAP goes through these devices compared to the total uncontrolled HAP emissions in the process (less than 0.1% for Acetochlor and Butachlor and 3.8% for Alachlor), an upper limit of 85°C will still achieve >90% control for each process. Monsanto will provide an engineering assessment for this monitoring parameter in the Notification of Compliance Status Report.

Reclassification of a vent stream due to a different operating scenario

In the original precompliance plan, the Azo Incinerator in the A-Unit was identified as a large control device requiring 98% control for Acetochlor, Alachlor and Butachlor. However, the Butachlor process generates much lower HAP emissions than the Acetochlor or Alachlor processes. During Butachlor production, the process vent that goes to the Azo Incinerator – Process Off-gas (POG) – is not classified as a “large vent” requiring 98% control per §63.1362(b)(2)(ii). As a result, the POG process vent is included in the 90% control efficiency calculation for the Butachlor process. During Acetochlor and Alachlor production, POG is excluded from the overall process calculation of 90% control because it meets the criteria for a large process vent that requires 98% control.

Change in HCl/Cl₂ emission limit

A compliance demonstration was performed on the MP Propachlor process for HCl emissions. The process vent standard for HCl/Cl₂ in §63.1362(b)(3)(ii) is either 94% control from the sum of all vents or providing control such that outlet concentrations are less than or equal to 20 ppmv. The option selected was the 94% control standard for the two large control devices in the area: the Step II Reactor Absorber and the Caustic Scrubber. However, during the performance test it was determined that the outlet HCl concentration on the scrubber was significantly less than the 20 ppmv limit. All the MP process vents that contain HCl/Cl₂ vent through the Caustic Scrubber; the 20 ppmv outlet concentration will be used for compliance with the HCl/Cl₂ limit.

Eliminate wastewater treatment plant monitoring parameters

The original precompliance plan listed three wastewater treatment plant (WWTP) monitoring parameters: influent flow to the wastewater treatment plant, aeration tank temperature, and aeration tank MLVSS. Because the WWTP is an "enhanced biological treatment process" as defined in §63.111, the only continuous monitoring requirement is daily verification that the aeration tank biomass concentration is greater than or equal to 1 kg/m³ MLVSS. Therefore, monitoring of the influent flow and aeration tank temperature is not required.

Attached are Summary Tables 2-A, 3-A, and 4-A that were included with the original precompliance plan. These tables have been updated to reflect the revisions presented in this supplement to the plan.

Please don't hesitate to contact Julie Peshkin at 563-262-5607 if you have any questions or comments about these changes.

Sincerely,



Oscar Berryman
Plant Manager

Enclosure

cc: Mr. Art Spratlin, Director
Air, RCRA and Toxics Division
USEPA Region VII

TABLE 3-A

MP - SUMMARY OF AIR POLLUTION CONTROL DEVICES

Process	Device	Status	63.1366 Parameter(s)	Alternative Parameter(s)	Proposed Parameter if < 1 ton/yr	Parameter Limits ⁽¹⁾	Basis for Parameter Limits
MON13900	Autoclave Condenser	LCD	Vapor outlet temperature	Batch - condenser outlet differential temperature, coolant temperature (during specified episodes)	N/A	Differential temperature between the batch and condenser outlet during batch reaction cycle and initial depressure. Differential temperature >80 deg F when batch is below 100 deg F, differential temperature >85 deg F when batch temperature is above 100 deg F. Coolant temperature <5 deg F during other batch emission episodes.	MACT Condenser Equations, engineering assessment
	Autoclave Condenser	LCD	Vapor outlet temperature	Batch - condenser outlet differential temperature (during specified episodes)	N/A	Differential temperature between the batch and condenser outlet during batch reaction cycle and initial depressure. Differential temperature >80 deg F when batch is below 100 deg F, differential temperature >85 deg F when batch temperature is above 100 deg F. Coolant temperature <5 deg F during other batch emission episodes.	MACT Condenser Equations, engineering assessment
	Autoclave Receiver	SCD and <1 ton/yr	N/A	N/A	Coolant temperature	<10 deg F coolant temperature	Engineering assessment
	Autoclave Receiver	SCD and <1 ton/yr	N/A	N/A	Coolant temperature	<10 deg F coolant temperature	Engineering assessment
	MON 5744 Receiver	SCD and <1 ton/yr	N/A	N/A	Coolant temperature	<10 deg F coolant temperature	Engineering assessment
	Scrubber	SCD	Water flow or pressure drop	N/A	N/A	Recirculation flow >30 gpm	Stack Sampling, Hysys design evaluation
	Autoclave Condenser	SCD and <1 ton/yr	N/A	N/A	Coolant temperature	<55 deg F coolant temperature	Engineering assessment
	Autoclave Condenser	SCD and <1 ton/yr	N/A	N/A	Coolant temperature	<55 deg F coolant temperature	Engineering assessment
	Autoclave Receiver	SCD and <1 ton/yr	N/A	N/A	Coolant temperature	<55 deg F coolant temperature	Engineering assessment
	Autoclave Receiver	SCD and <1 ton/yr	N/A	N/A	Coolant temperature	<55 deg F coolant temperature	Engineering assessment
Propachlor	Scrubber	SCD and <1 ton/yr	N/A	N/A	Water flow	Recirculation flow >25 gpm	Hysys design evaluation
	Step II Reactor Absorber	LCD	Water flow or pressure drop	N/A	N/A	>30 gpm water flow	Hysys design evaluation, performance demonstration
	CAC Stripper Absorber	SCD	Water flow or pressure drop	N/A	N/A	>30 gpm water flow	Hysys design evaluation
	Caustic Scrubber	LCD	Water flow or pressure drop, and pH	N/A	N/A	Recirculation flow >25 gpm; pH >2	Hysys design evaluation, performance demonstration

Notes:

(1) Parameter limits are subject to change based on additional design evaluation.

Key:

Large Control Device (LCD) - Control device that controls process vents, and total HAP emissions into the control device from all sources are ≥ 10 tons/yr ($\geq 20,000$ lb/yr)
 Small Control Device (SCD) - Control device that controls process vents, and total HAP emissions into the control device from all sources are <10 tons/yr ($<20,000$ lb/yr)
 >98% - Subject to process vent standard at 40 CFR 63.1362(b)(2)(ii)(A)
 gpm - gallons per minute

TABLE 2-A

A-UNIT - SUMMARY OF AIR POLLUTION CONTROL DEVICES

Process	Device	Status	63.1366 Parameter(s)	Alternative Parameter(s)	Proposed Parameter if < 1 ton/yr	Parameter Limits ⁽¹⁾	Basis for Parameter Limits
Acetochlor CMA	Azo Educator Scrubber (with packed slack)	13-903, 13-1019	Water flow or pressure drop	N/A	N/A	>8 gpm scrubber water inlet	Hysys design evaluation
	Step II Reactor A Condenser	13-757	Vapor outlet temperature	N/A	N/A	<50 deg C	BDC Condenser Modeling
	Step II Reactor B Condenser	13-758	Vapor outlet temperature	N/A	N/A	<50 deg C	BDC Condenser Modeling
	Step II Scrubber	13-503	Water flow or pressure drop, and pH	Pump amperage	N/A	>14 Amps on recirculation pump; pH >2	Pump current draw when pumping compared to deadhead
Acetochlor Alachlor Butachlor	Step III Scrubber	13-514	Water flow or pressure drop	N/A	N/A	>17 gpm water to scrubber	Performance Demonstration
	Azo Incinerator / Scrubber System						
	Incinerator - Acetochlor and Alachlor	13-534	Combustion chamber temperature	N/A	N/A	>1,500 deg F	Performance Demonstration, literature and EPA guidance for combustion devices
	Incinerator - Butachlor	13-534	Combustion chamber temperature	N/A	N/A	>1,500 deg F	Performance Demonstration, literature and EPA guidance for combustion devices
	Scrubber	13-S-3	Water flow or pressure drop, and pH	N/A	N/A	Circulation flow >80 gpm; pH >2	Performance Demonstration
	Dehydrator Condenser "A"	13-1007	N/A	N/A	Condensate temperature	<85 deg C	Stack sampling, Hysys design evaluation
	Dehydrator Condenser "B"	13-1011	N/A	N/A	Condensate temperature	<85 deg C	Stack sampling, Hysys design evaluation

Notes:

(1) Parameter limits are subject to change based on additional design evaluation.

(2) During Butachlor production, the vent stream going to the incinerator does not require 98% control and the device is a SCD.

(3) The compliance demonstration performed in August, 2003 showed considerably more HAP loading to this device.

However, all previous testing data and process emission calculations show a much lower level than the performance demonstration.

The performance demonstration will be repeated. Until the numbers are confirmed, the original HAP loading of 45,600 lbs/yr will be used.

Key:

Large Control Device (LCD) - Control device that controls process vents, and total HAP emissions into the control device from all sources are ≥ 10 tons/yr ($\geq 20,000$ lb/yr)Small Control Device (SCD) - Control device that controls process vents, and total HAP emissions into the control device from all sources are <10 tons/yr ($<20,000$ lb/yr)

>98% - Subject to process vent standard at 40 CFR 63.1362(b)(2)(iii)(A)

gpm - gallons per minute

TABLE 4-A

GT - SUMMARY OF AIR POLLUTION CONTROL DEVICES

Process	Device		Status	63.1366 Parameter(s)	Alternative Parameter(s)	Proposed Parameter if < 1 ton/yr	Parameter Limits	Basis for Parameter Limits
GT Unit	Tech Reactor Scrubber	4-0229	LCD (1)	Water flow or pressure drop	Average temperature between top and bottom of scrubber	N/A	Average temperature maximum (top temperature plus bottom temperature divided by 2) <55 Degrees C	Hysys design evaluation, performance demonstration
	Process Fume Scrubber	4-0785	LCD (1)	Water flow or pressure drop	Average temperature between top and bottom of scrubber	N/A	Average temperature maximum (top temperature plus bottom temperature divided by 2) <56 Degrees C	Hysys design evaluation, performance demonstration

Notes:

(1) Does not fall under 98% control standard due to high, dilute flow.

Key:

Large Control Device (LCD) - Control device that controls process vents, and total HAP emissions into the control device from all sources are ≥ 10 tons/yr ($\geq 20,000$ lb/yr)
 Small Control Device (SCD) - Control device that controls process vents, and total HAP emissions into the control device from all sources are <10 tons/yr ($<20,000$ lb/yr)
 >98% - Subject to process vent standard at 40 CFR 63.1362(b)(2)(iii)(A)

XI. Appendix G: EPA PSD Permit dated November 12, 1982



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
324 EAST ELEVENTH STREET
KANSAS CITY, MISSOURI - 64106

NOV 12 1982

Mr. R.L. Fields
Plant Manager
Monsanto Company
P.O. Box 473
Muscatine, Iowa 52761

Dear Mr. Fields:

Re: Proposed B-8 Boiler Project.

Your request for approval to modify Monsanto's plant near Muscatine, Iowa has been reviewed in accordance with the requirements of the federally-established Prevention of Significant Deterioration of air quality (PSD) regulations, 40 CFR 52.21 (1978), as amended on August 7, 1980 (45 FR: 52735).

Based on information contained in the administrative record (the contents of which are listed in Attachment A) which includes, but is not limited to, Monsanto's permit application of June 11, 1982, and subsequent submittals, the U. S. Environmental Protection Agency, Region VII, has determined that the proposed project is approvable under the federal PSD regulations. The EPA regional office is of the opinion that the requirements of 40 CFR 52.21 (j) through (r) have been (or will be) met. This letter constitutes a PSD permit and contains our approval of the proposed project (as said project was described to us by Monsanto) subject to the following conditions:

Condition 1 -- On and after the date on which the initial performance test (or initial compliance demonstration) is completed (as required by Conditions 4 and 5) for the unit or process in question, the owner/operator of the units or processes that are listed below (hereafter also referred to as the affected facility and/or affected facilities) shall not cause to be discharged into the atmosphere from said affected facilities any gases which have an opacity in excess of the applicable standard specified below or any gases which contain the specified pollutant(s), as measured by the performance test method(s) or compliance demonstration method(s) that are specified below and/or in Conditions 4, 5, 6, and 7, in excess of the following established best available control technology (BACT) emission limits:

BACT EMISSION LIMITS (1) (2)

<u>Unit/Process</u>	<u>Pollutant</u>	<u>BACT Emission Limit</u>	<u>Averaging Time</u>
B-8 Boiler (3)	SO ₂	1.95 lbs/MMBTU	3-hour Rolling (5)
	PM	0.03 lbs/MMBTU	(4)
	NO _x	0.60 lbs/MMBTU	30-day Rolling (5)
	Opacity	20%	6-minute Average (6)
Ash Handling	PM	0.01 gr/dscf	(4)
	Opacity	20%	6-minute Average (6)
Coal Handling	PM	0.01 gr/dscf	(4)
	Opacity	20%	6-minute Average (6)

NOTES: Sulfur dioxide (SO₂); particulate matter (PM); nitrogen oxides (NO_x)

- (1) The above values (opacity included) constitute the BACT emission standards for the affected facility and pollutant in question and apply at all times except during periods of shutdown as defined in the federal NSPS regulations, 40 CFR Part 60, Subpart A, and except during bypass periods allowed by Condition 9, below. Failure to achieve any applicable emission limit after the date mentioned above may constitute a violation of the Clean Air Act.
- (2) The emission limits are expressed in terms of pounds per million British Thermal Units of heat input (lbs/MMBTU) and in terms of grains per dry cubic foot at standard conditions (gr/dscf). Standard conditions means a temperature of 68° Fahrenheit and a pressure of 29.92 inches of mercury.
- (3) Except during periods of startup, only coal may be burned in the B-8 boiler.
- (4) The averaging time shall be the duration of the performance test(s) required under Condition 4. Each performance test shall consist of three separate runs the lengths of which (and such other matters, e.g., sampling volume, sampling gas temperature) shall be specified

by the PSD-implementing agency's representative at the pre-test meeting mentioned below. For purposes of demonstrating compliance with the applicable emission limitation, the arithmetic mean of the three runs shall apply.

- (5) See Conditions 5 and 6.
- (6) Compliance with the opacity standards shall be determined by conducting visual observations in accordance with the provisions of Reference Method 9 of 40 CFR Part 60, Appendix A. The PSD implementing agency may also use the opacity continuous emission monitoring system (CEMS) data for compliance determination purposes.

Condition 2 -- The owner/operator shall furnish the PSD-implementing agency (i.e., the EPA regional office, unless enforcement of this permit is taken over by the Iowa Department of Environmental Quality (IDEQ), in which case both the EPA and the IDEQ shall be notified) written notification as follows:

- A notification of the date upon which construction of the B-8 boiler was commenced, postmarked no later than 30 days after such date.
- A notification of the anticipated date of initial startup (as defined in 40 CFR 60.2 of the federal NSPS regulations) of the boiler. This notification shall be postmarked not more than 60 days nor less than 30 days prior to such date.
- A notification of the actual date of initial startup of boiler. This notification shall be postmarked within 15 days after such date.
- A notification of any performance test, compliance demonstration, or CEMS performance evaluation to be conducted by the owner/operator under the requirements of this permit. Notification shall be postmarked not less than 30 days prior to the initial date of said performance test, compliance demonstration, or performance evaluation.

Condition 3 - Our approval of the proposed project shall become invalid if a continuous program of construction is not commenced within eighteen (18) months after the effective date of this PSD permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable period of time.

Condition 4 - Compliance Provisions - PM - (B-8 Boiler and Miscell. Baghouses):

The B-8 boiler and the coal handling and ash handling systems must be performance tested in accordance with EPA Reference Methods 1, 2, 3, and 5 as in effect at the time of the test to demonstrate their compliance with respect

to the applicable particulate matter (PM) BACT emission limit specified in Condition 1, above. Within 60 days after achieving the maximum rate at which the boiler will be operated, but not later than 180 days after initial startup of the boiler and at such other times as may be requested and/or required by the PSD-implementing agency, the owner/ operator of the boiler and handling systems shall conduct performance test(s) of said affected facilities and shall furnish the PSD-implementing agency a written report of the results of each such test within said 60/180-day period.

A pretest meeting shall be held at the site of the source no later than fifteen (15) days prior to the date of the performance test. The meeting shall be attended by representatives of the PSD-implementing agency, Monsanto, and the independent performance testing firm, if such firm is used. If at the time of testing an agency other than the EPA is the PSD-implementing agency, the EPA regional office reserves the right to have a representative in attendance at the pre-test meeting and at the performance test. If the EPA is the PSD-implementing agency, then a representative of the Iowa Department of Environmental Quality shall be invited to attend the pre-test meeting and the performance test.

Prior to the pre-test meeting, the owner/operator of the units in question shall complete and submit to the PSD-implementing agency a Proposed Test Plan Format questionnaire. Said questionnaire will be sent to the owner/operator upon request or upon notification of initial startup. The owner/operator shall also make available to the PSD-implementing agency such records as may be necessary to determine the conditions to be maintained during the performance test(s). Upon reviewing the Proposed Test Plan and such records mentioned above, the representative of the PSD-implementing agency shall set forth the conditions (e.g., operating load) under which the performance test(s) will be conducted.

The above-mentioned questionnaire shall be completed and submitted to the PSD-implementing agency no later than five (5) working days prior to the pre-test meeting date, unless otherwise stated in future correspondence from the agency.

It shall be the owner/operator's responsibility to coordinate and schedule the meeting, and to formally notify all participants of the pre-test meeting date, and of the performance test date(s).

It shall also be the owner/operator's responsibility to provide performance testing facilities as follows:

- Sampling ports
- Safe sampling platform(s)
- Safe access to sampling platform(s)
- Utilities for sampling and testing equipment.

Condition 5 - Initial Compliance Demonstrations - SO₂ and NO_x - (B-8 Boiler):
Initial demonstrations of compliance shall be performed by the owner/operator of the B-8 boiler in accordance with the procedures and requirements that are set forth below and in Conditions 6 and 7 to demonstrate the unit's compliance with the "3-hour rolling average" and the "30-day rolling average" emission limitations of Condition 1.

The NO_x and SO₂ emissions data to be used in the compliance demonstrations shall be obtained by the owner/operator through the use of the continuous monitoring systems required by Condition 7.

Unless otherwise specified by the PSD-implementing agency in future correspondence, these initial NO_x and SO₂ compliance demonstrations are the only NO_x and SO₂ demonstrations in which prior notice is required by Condition 2.

The initial compliance demonstrations shall be based on the average emission rates established per the procedures mentioned in Conditions 6 and 7 for the time periods in question (i.e., for SO₂, 3-hour rolling averages; for NO_x, thirty (30) successive boiler operating days (i.e., days during which the B-8 boiler was operated, irrespective of the total number of hours the boiler was operated on each or any of the days in question)).

Within 60 days after achieving the maximum rate at which the B-8 boiler will be operated, but no later than 180 days after initial startup of the boiler, the owner/operator shall begin the initial compliance demonstrations for SO₂ and NO_x. The compliance demonstration shall begin only after the CEM systems performance evaluations have been completed. The owner/operator shall also furnish the PSD-implementing agency a written report of the results of each said initial compliance demonstration within sixty (60) days following completion of the demonstration.

Condition 6 - General Compliance Provisions (PM, SO₂ and NO_x Emissions) -
After each initial compliance demonstration is completed per the requirements of Condition 5, the following compliance demonstration provisions shall apply:

SO₂ and NO_x:

The provisions specified below in conjunction with the provisions of Condition 7 (e.g., emission monitoring and emission calculations) will serve as the basis for making formal determinations of compliance of the boiler with respect to the emission limits of Condition 1.

Particulate matter:

For each run of Reference Method 5, the appropriate f-factor and computation procedures contained in Reference Method 19 of the federal NSPS regulations (40 CFR Part 60, Appendix A) shall be used by the owner/operator to calculate the dry basis particulate matter emission rate for the run, expressed in terms of lbs/MMBTU of heat input. As previously mentioned, the average of three (3) separate runs shall constitute a performance test.

For determinations of particulate matter emissions, oxygen (or carbon dioxide) sample(s) shall be obtained simultaneously with each run of Method 5 by traversing the duct at the same sampling location(s).

SO₂ and NO_x:

The procedures and methods outlined in said Reference Method 19 shall also be used by the owner/operator in conjunction with the SO₂ and NO_x emissions data collected under the requirements of this permit to demonstrate compliance with the BACT emission limits specified in Condition 1. Mean emission rates over the averaging period in question shall be computed by the owner/operator using the equation given in §6.1 of said Reference Method 19. (NOTE: Also see Condition 10, General Recordkeeping).

Condition 7 - Emission Monitoring (Opacity, SO₂, NO_x, and O₂ or CO₂) - The owner/operator of the B-8 boiler shall install, calibrate, operate, and maintain continuous emission monitoring (CEM) systems, and record the output of each system, for measuring the opacity, SO₂, NO_x, and oxygen (O₂) or carbon dioxide (CO₂) content of the flue gas discharged into the atmosphere from the unit.

The installation, evaluation, and operation of the CEM systems shall be in accordance with the provisions of 40 CFR 60.13(f), (c)(1), (d), and (e) of the federal NSPS regulations, unless otherwise specified in this permit.

All of the CEM systems shall be installed and operational prior to the initial particulate matter performance test. Verification of operational status shall, as a minimum, consist of the completion of the conditioning period specified in the applicable performance specification of 40 CFR Part 60, Appendix B.

Continuous monitoring of emissions from the miscellaneous (i.e., the coal handling and the ash handling systems) units is not required under this permit.

Measurement of the O₂ (or CO₂) content of emissions shall be made at each location where SO₂ and NO_x emissions are monitored.

Each continuous monitoring system shall be operated (and the data recorded) during all periods of operation of the boiler including periods of startup, shutdown, or malfunction except during periods of continuous emission monitoring system breakdown, repair, calibration check, and/or zero and span adjustments of the system in question.

During the initial particulate matter performance test, or within 7 days thereafter, and at such other times as may be requested by the PSD-implementing agency, the owner/operator shall conduct performance evaluations of the CEM systems required under this permit. Within 60 days of the evaluations the owner/operator shall also furnish the PSD-implementing agency with two copies of the evaluation report(s).

The 1-hour averages required under said §60.13 shall be expressed in terms of lbs/MMBTU of heat input and shall be used by the company to calculate 3-hour rolling average SO₂ and "30-day rolling average" NO_x emission rates.

The 1-hour averages and the 6-minute opacity averages shall be calculated using the data points required under §60.13(h).

The span values for the NO_x, SO₂, and opacity continuous monitoring systems shall be as follows:

NO_x : 1000 ppm
 SO₂ : 1500 ppm
 Opacity: Between 60 and 80%

Regarding breakdowns and/or repairs of the monitoring systems, the owner/operator of the B-8 boiler unit shall initiate servicing of the system(s) within five (5) days and return the monitor to operation in no more than fifteen (15) days from initial data loss.

Condition 8 - Reporting Requirements - The reporting requirements of this Condition shall begin the calendar quarter in which the CEMS become operational, covering the entire quarter or portion thereof.

After the submission of the initial compliance demonstration report, the owner/operator shall, on a calendar quarter basis, report periods of excess emissions (i.e., periods when the computed emission estimate(s) exceed the "3-hour rolling average" or the "30-day rolling average" emission limitation(s), and 6-minute periods when the opacity standard is exceeded) in accordance with the quarterly reporting requirements outlined at 40 CFR 60.7 of the federal NSPS regulations.

Condition 9 - By-pass Provisions - Except as provided below, bypassing of the boiler's particulate matter emission control device is prohibited under this permit.

Startup: Bypassing during periods of startup (as defined in 40 CFR 60.2 of the federal NSPS regulations) shall be limited to a total of twenty (20) hours per calendar year. During each startup, the owner/operator shall proceed through the startup phase as expeditiously as possible taking into account safety-related, mechanical, and/or operational considerations. For each said bypass, the owner/operator shall record the date, time, and duration of the bypass.

Malfunction Conditions: Bypassing during periods other than periods of startup is prohibited and shall be considered a violation of this condition unless the owner/operator subsequently demonstrates to the PSD-implementing agency's satisfaction that the bypass occurred during an unavoidable malfunction condition (as defined in 40 CFR 60.2 of the federal NSPS regulations).

For each bypass occurring during periods other than periods of startup of the boiler, the owner/operator shall prepare a written report containing the following information: (1) the date, time, and duration of the bypass; (2) an explanation of why the bypass could not be avoided; (3) a listing of the factors which contributed to the bypass condition; and (4) a statement of what the owner/operator has done (or will do) to prevent the condition from recurring. Each report shall be submitted to the PSD-implementing agency within seven (7) days of the occurrence.

Whether or not bypassing during such other periods violates the conditions of this permit will be decided by the PSD-implementing agency on a case-by-case basis and in consideration of the information contained in the report(s) mentioned above and in consideration of any additional information provided by the applicant and/or obtained by the PSD-implementing agency.

Condition 10 - General Recordkeeping - The owner/operator shall maintain records of the following information on a daily basis:

- (1) Calendar date.
- (2) The average SO₂ emission rate (in terms of lbs per million BTU's of heat input) for each rolling 3-hour period, commencing at 12:01 a.m. of the first boiler operating day.
- (3) The average NO_x emission rates (in terms of lb per million BTUs of heat input) for each 30 successive boiler operating days, ending with the last 30-day period in the quarter.
- (4) Opacity readings.

- (5) Reasons for non-compliance with the emission standards; and, description of corrective actions taken.
- (6) Identification of the boiler operating days for which emission or opacity data have not been obtained; justification for not obtaining sufficient data; and a description of corrective actions taken.
- (7) Identification of the times when emissions data have been excluded from the calculation of average emission rates because of startup, shutdown, malfunction, or other reasons, and justification for excluding data for reasons other than startup, shutdown, or malfunction.
- (8) Identification of the "f" factor(s) used for calculation.
- (9) Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system.
- (10) Description of any modifications to the continuous monitoring system which could affect the ability of the continuous monitoring system to comply with the Performance Specifications of Appendix B of the federal NSPS regulations.

Condition 11 - General Maintenance and Operating Provisions - At all times, including periods of startup, shutdown, and malfunction, the owner/operator shall, to the extent practicable, maintain and operate the units approved herein (including associated air pollution control equipment) in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being followed by the owner/operator will be based on information available to the PSD-implementing agency. Said information may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

Condition 12 - On and after the initial startup date of the B-8 boiler, the owner/operator of existing boiler units B-5, B-6, and B-7 shall not cause to be burned in said existing boiler units any fuel oil which contains a sulfur content in excess of 1.05 %, by weight. For each batch of fuel oil purchased for use in said existing boilers, the owner/operator shall obtain a fuel analysis which specifies, at a minimum, the percent sulfur content (by wt.), the calorific heating value (in terms of BTUs per gallon) and the density of the batch. Fuel specification data obtained from the fuel supplier(s) for the batch in question will satisfy the requirements of this condition.

Condition 13 - All reports, calculation sheets, analyses, records, purchase orders, etc., mentioned in this permit letter shall be retained by the com-

pany for at least two years following the date of the report, calculation, analysis, record, etc. All such documents shall be made available for inspection and/or copying to local, state, and/or federal air pollution control agency inspection or enforcement personnel, upon request.

(END OF CONDITIONS)

The restrictions as applied to the above mentioned units and/or processes are plant specific restrictions (i.e., the requirements will probably not apply if the unit is moved to another plant). Change of ownership and/or a change of boiler ID number will not affect the applicability of the restriction(s) to the unit or process in question.

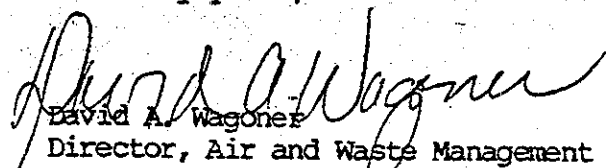
We wish to emphasize that the approval being issued today pertains only to the requirements of the above-referenced PSD regulations. The approval does not relieve the company of its continuing responsibility to comply fully with the requirements of the applicable state implementation plan or of any other requirements of federal, state or local regulations.

Any owner/operator who constructs, modifies, or operates an affected source not in accordance with the PSD permit application as reviewed, and approved, or not in accordance with the PSD permit as conditioned herein, may be in violation of Sections 113 and 167 of the Clean Air Act (42 U.S.C. 7413 and 7467).

The owner/operator is reminded that it is his responsibility to properly locate the test ports to be used during performance testing of the units and CEMS affected by this permit. The responsibility of demonstrating acceptability for those locations considered questionable by the agency's representative also lies with the owner/operator. If you desire guidance in locating said test ports, you may contact Mr. Robert Dona of our Environmental Services Division at (816)374-4461. It is recommended that any such request for guidance be made in advance of the actual installations to avoid delays and expenses necessitated by the relocation of said ports or port facilities.

As used above, the PSD-implementing agency refers to the agency which will enforce the provisions of this PSD permit. With regard to this permit, the PSD-implementing agency is the EPA regional office mentioned above. Thus, future correspondence, notifications and/or reports relating to this PSD permit shall, unless otherwise notified, be submitted to me at the above address. If you have any questions pertaining to this letter, please contact either Mr. Carl M. Walter, Chief, Air Branch, or Mr. Charles W. Whitmore, Chief, Technical Analysis Section, Air Branch, at 816/374-6525.

Sincerely yours,


David A. Wagoner
Director, Air and Waste Management Division

cc: Rex Walker

XII. Appendix H: 40 CFR 62 Subpart III



Federal Register

Friday,
October 3, 2003

Part II

Environmental Protection Agency

40 CFR Part 62

**Federal Plan Requirements for
Commercial and Industrial Solid Waste
Incinerators Constructed On or Before
November 30, 1999; Final Rule**

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 62

[AD-FRL-7562-1]

RIN 2060-AJ28

Federal Plan Requirements for Commercial and Industrial Solid Waste Incinerators Constructed on or Before November 30, 1999

AGENCY: Environmental Protection Agency (EPA)

ACTION: Final rule.

SUMMARY: On December 1, 2000, the EPA adopted emission guidelines for existing commercial and industrial solid waste incineration (CISWI) units. Sections 111 and 129 of the Clean Air Act (CAA) require States with existing CISWI units subject to the emission guidelines to submit to the EPA plans that implement and enforce the emission guidelines. Indian Tribes may submit, but are not required to submit, Tribal plans to implement and enforce the emission guidelines in Indian

country. State plans were due from States with CISWI units subject to the emission guidelines on December 1, 2001. If a State or Tribe with existing CISWI units does not submit an approvable plan, sections 129 and 111 of the CAA require the EPA to develop, implement, and enforce a Federal plan for CISWI units located in that State or Tribal area within 2 years after promulgation of the emission guidelines (December 1, 2002). The EPA proposed a Federal plan for CISWI units on November 25, 2002. This action promulgates a Federal plan to implement emission guidelines for CISWI units located in States and Indian country without effective State or Tribal plans. This Federal plan is an interim action because on the effective date of an approved State or Tribal plan, the Federal plan will no longer apply to CISWI units covered by the State or Tribal plan.

EFFECTIVE DATE: The final rule is effective November 3, 2003.

ADDRESSES: Follow the detailed instructions in the **SUPPLEMENTARY INFORMATION** section.

FOR FURTHER INFORMATION CONTACT: For further information concerning specific aspects of this Federal plan, contact Mr. David Painter at (919) 541-5515, Program Implementation and Review Group, Information Transfer and Program Integration Division (E143-02), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, email: painter.david@epa.gov. For technical information, contact Mr. Fred Porter at (919) 541-5251, Combustion Group, Emission Standards Division (C439-01), U.S. Environmental Protection Agency, Research Triangle Park, N.C. 27711, email: porter.fred@epa.gov. For information regarding implementation of this Federal plan, contact the appropriate Regional Office (Table 1) as shown in the **SUPPLEMENTARY INFORMATION**.

SUPPLEMENTARY INFORMATION: *Regulated entities.* The Federal plan affects the following North American Industrial Classification System (NAICS) and Standard Industrial Classification (SIC) codes:

Category	NAICS Code	SIC Code	Examples of potentially regulated entities
Any industry using a solid waste incinerator as defined in the regulations	325	28	Manufacturers of chemicals and allied products.
	334	34	Manufacturers of electronic equipment.
	421	36	Manufacturers of wholesale trade, durable goods
	321, 337	24, 25	Manufacturers of lumber and wood furniture.

This list is not intended to be exhaustive, but rather provides a guide for readers regarding entities the EPA expects to be regulated by this rule. This table lists examples of the types of entities that may be affected by this rule. Other types of entities not listed could also be affected. To determine whether your facility, company, business organization, etc., is regulated by this action, carefully examine the applicability criteria in 40 CFR 62.14510 through 62.14531 of subpart III. If you have any questions regarding the applicability of this action to your solid waste incineration unit, refer to the **FOR FURTHER INFORMATION CONTACT** section.

Judicial Review: The EPA proposed this rule for CISWI units on November 25, 2002, (67 FR 70640). This action adopting a rule for CISWI units constitutes final administrative action concerning that proposal. Under section 307(b)(1) of the CAA, judicial review of this final rule is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by December 2, 2003. Under section 307(d)(7)(B) of the CAA, only an

objection to this rule that was raised with reasonable specificity during the period for public comment can be raised during judicial review. Moreover, under section 307(b)(2) of the CAA, the requirements established by today's final action may not be challenged separately in any civil or criminal proceeding brought by the EPA to enforce these requirements.

Docket. Docket Numbers A-2000-52 and A-94-63 contain the supporting information for the CISWI Federal plan and for the EPA's promulgation of EG for existing CISWI units, respectively. Docket A-2000-52 (OAR-2002-0069) incorporates all of the information in Docket A-94-63. The dockets are organized and complete files of all information submitted to or otherwise considered by EPA in the development of this rulemaking. The dockets are available for public inspection and copying between 8:30 a.m. and 4:30 p.m., Monday through Friday, at EPA's Air and Radiation Docket and Information Center, 1301 Constitution Avenue, NW, Room B102, Washington, DC 20460. The mailing address for the

Center is Air and Radiation Docket, Mail Code 6102T, 1200 Pennsylvania Avenue, NW, Washington, DC 20460. A reasonable fee may be charged for copying docket materials. The Center may be contacted by calling (202) 566-1742 between the hours of 7:30 a.m. and 5:30 p.m., Monday through Friday. The Center may also be contacted by fax using the fax number (202) 566-1741 and by E-mail using the E-mail address "A-and-R-Docket@epa.gov".

Electronic Access. Electronic versions of the public dockets are available through EPA's electronic public docket and comment system, EPA Dockets. You may use the EPA Dockets at <http://www.epa.gov/edocket/> to view public comments, access the indices of the contents of the official public dockets, and to access those documents in the public dockets that are available electronically. Once in the system, select "search" and key-in the appropriate docket identification number. Although not all docket materials may be available electronically, you may still access any of the publicly available docket

materials through the docket facility identified in this document.

Worldwide Web (WWW) In addition to being available in the dockets, an electronic copy of today's document also will be available on the World Wide Web site that the EPA has established for CISWI units. The address

is <http://www.epa.gov/ttn/atw/129/ciwi/ciwiwp.html>. The CISWI Web site references other Web sites for closely related rules, such as large and small municipal waste combustors (MWC), hazardous waste, and hospital/medical/infectious waste incinerators (HMIWI).

The large MWC and HMIWI sites contain the respective State plan guidance documents

EPA Regional Office Contacts. Table 1 lists EPA Regional Offices that can answer questions regarding implementation of this rule.

TABLE 1.—EPA REGIONAL CONTACTS FOR CISWI

Region	Contact	Phone/fax	States and protectorates
I	EPA New England, Director, Air Compliance Program, 1 Congress Street, Suite 1100 (SEA), Boston, MA 02114-2023.	617-918-1650 617-918-1505 (fax)	CT, ME, MA, NH, RI, VT
II	U.S. EPA—Region 2, Air Compliance Branch, 290 Broadway, New York, New York 10007.	212-637-4080 212-637-3998 (fax)	NJ, NY, Puerto Rico, Virgin Islands.
III	U.S. EPA—Region 3, Chief, Air Enforcement Branch (3AP12), 1650 Arch Street, Philadelphia, PA 19103-2029.	215-814-3438 215-814-2134 (fax)	DE, DC, MD, PA, VA, WV
IV	U.S. EPA—Region 4, Air and Radiation, Technology Branch, Atlanta Federal Center, 61 Forsyth Street, Atlanta, Georgia 30303-3104.	404-562-9105 404-562-9095 (fax)	AL, FL, GA, KY, MS, NC, SC, TN
V	U.S. EPA—Region 5, Air Enforcement and Compliance Assurance Branch, (AR-18J), 77 West Jackson Boulevard, Chicago, IL 60604-3590.	312-353-2211 312-886-8289 (fax)	IL, IN, MN, OH, WI
VI	U.S. EPA—Region 6, Chief, Toxics Enforcement, Section (6EN-AT), 1445 Ross Avenue, Dallas, TX 75202-2733.	214-665-7224 214-665-7446 (fax)	AR, LA, NM, OK, TX
VII	U.S. EPA—Region 7, 901 N 5th Street, Kansas City, KS 66101.	913-551-7020 913-551-7844 (fax)	IA, KS, MO, NE
VIII	U.S. EPA—Region 8, Air Program Technical Unit, (Mail Code 8P-AR), 999 18th Street, Suite 500, Denver, CO 80202.	303-312-6007 303-312-6064 (fax)	CO, MT, ND, SD, UT, WY
IX	U.S. EPA—Region 9, Air Division, 75 Hawthorne Street, San Francisco, CA 94105.	415-744-1219 415-744-1076 (fax)	AZ, CA, HI, NV, American Samoa, Guam
X	U.S. EPA—Region 10, Office of Air Quality, 1200 Sixth Avenue, Seattle, WA 98101.	(206) 553-4273 (206) 553-0110 (fax)	

Organization of this document The following outline is provided to aid in locating information in this preamble.

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I. Background Information

A. What Is the Statutory Authority for Today's Action?

Today's action is taken under the authority of Sections 111, 114, 129, and 301(a) of the Clean Air Act, as amended (42 U.S.C. 7411, 7414, 7429, and 7601(a)). Today's action is a rulemaking subject to the provision of Clean Air Act section 307(d). See 42 U.S.C. 7606(d)(1).

B. What Is the Purpose of This Federal Plan?

Section 129 of the CAA requires the EPA to develop emission guidelines under the authority of sections 111 and 129 of the CAA for existing "solid waste incineration units combusting commercial or industrial waste." The EPA refers to these units as "commercial and industrial solid waste incineration" (CISWI) units. The EPA proposed emission guidelines for CISWI units on November 30, 1999, and promulgated them on December 1, 2000, (65 FR 75338) (to be codified at 40 CFR part 60, subpart DDDD). In writing Section 129 of the CAA, Congress looked first to the States as the preferred implementers of emission guidelines for existing CISWI units. To make these emission guidelines enforceable, States with existing CISWI units must have submitted to the EPA within one year following promulgation of the emission guidelines (by December 1, 2001) State plans that implement and enforce the emission guidelines. For States or Tribes that do not have an EPA-approved and effective plan, the EPA must develop and implement a Federal plan within two years following promulgation of the emission guidelines (by December 1, 2002). The EPA sees this Federal plan as an interim measure to ensure that Congressionally mandated emission standards under authority of sections 111 and 129 of the CAA are implemented until States assume their role as the preferred implementers of the emissions guidelines. Thus, the EPA encourages States to either use the Federal plan as a template to reduce the effort needed to develop their own plans or to simply take delegation to directly implement and enforce the guidelines. States without any existing CISWI units are required to submit to the Administrator a letter of negative declaration certifying that there are no CISWI units in the State. No plan is required for States that do not have any CISWI units.

As discussed in section VII E of this preamble, Indian Tribes may, but are not required to, submit Tribal plans to cover CISWI units in Indian Country. A Tribe may submit to the Administrator a letter of negative declaration certifying that no CISWI units are located in the Tribal area. No plan is required for tribes that do not have any CISWI units. CISWI units located in States or Tribal areas that mistakenly submit a letter of negative declaration would be subject to

the Federal plan until a State or Tribal plan has been approved and becomes effective covering those CISWI units.

Sections 111 and 129 of the CAA and 40 CFR 60.27(c) and (d) require the EPA to develop, implement, and enforce this Federal plan to cover existing CISWI units located in States that do not have an approved plan within two years after promulgation of the emission guidelines (by December 1, 2002, for CISWI units). Today's action promulgates a Federal plan for CISWI units that are not yet covered by an approved State or Tribal plan.

C. What Impact Does the U.S. Appeals Court Remand and the EPA's Granting of a Request for Reconsideration Have on This Federal Plan?

Subsequent to the EPA's promulgation of the final rule establishing the New Source Performance Standards (NSPS) and the Emission Guidelines (EG) for CISWI units, two events occurred that potentially could result in substantive changes to these standards. First, in August 2001, the EPA granted a request for reconsideration, pursuant to section 307(d)(7)(B) of the CAA, submitted on behalf of the National Wildlife Federation and the Louisiana Environmental Action Network, related to the definition of "commercial and industrial solid waste incineration unit" in the EPA's CISWI rulemaking. In granting this petition for reconsideration, the EPA agreed to undertake further notice and comment proceedings related to this definition. Second, on January 30, 2001, the Sierra Club filed a petition for review in the U.S. Court of Appeals for the D.C. Circuit challenging the EPA's final CISWI rule. On Sept. 6, 2001, the Court entered an order granting the EPA's motion for a voluntary remand of the CISWI rule without vacature. The EPA's request for a voluntary remand of the final CISWI rule was intended to allow the EPA to address concerns related to the EPA's procedures for establishing MACT floors for CISWI units in light of the DC Circuit Court's decision in *Cement Kiln Recycling Coalition v. EPA*, 255 F.3d 855 (DC Cir. 2001).

Neither the EPA's granting of the petition for reconsideration, nor the Court's order granting a voluntary remand, stay, vacate or otherwise influence the effectiveness of the currently existing CISWI regulations. Specifically, section 307(d)(7)(B) of the

CAA provides that "reconsideration shall not postpone the effectiveness of the rule," except that "[t]he effectiveness of the rule may be stayed during such reconsideration * * * by the Administrator or the court for a period not to exceed three months." In this case, neither the EPA nor the court stayed the effectiveness of the final CISWI regulations in connection with the reconsideration petition. Likewise, the DC Circuit granted the EPA's motion for a remand without vacature. Therefore, the Court's remand order had no impact on the effectiveness of the current CISWI regulations. Because the existing CISWI regulations remain in full effect, the EPA's obligation under section 129(b)(3) of the CAA to promulgate a Federal plan (to implement those regulations for existing units that are not covered by an approved and effective State plan) remains unchanged.¹ Therefore, the EPA is complying with its statutory obligations by promulgating the Federal plan for CISWI units.

To the extent that the EPA might take action in the future that results in changes in the underlying CISWI rule, in response to the petition for reconsideration or in response to the voluntary remand, the EPA will simultaneously amend this Federal plan to reflect any such changes. If such changes become necessary, interested parties, including States and sources, will have the opportunity to provide comments, and the EPA will reasonably accommodate the concerns of commenters as appropriate.

D. Status of State Plan Submittals

Sections 111(d) and 129(b)(2) of the CAA, as amended, 42 U.S.C. 7411(d) and 7429(b)(2), authorize EPA to develop and implement a Federal plan for CISWI located in States with no approved and effective State plan. Table 2 summarizes the current status of State plans. The CISWI covered in EPA-approved State plans are not subject to the CISWI Federal plan, as of the effective date specified in the Federal Register notice announcing the EPA's approval of the State plan. The EPA is not expecting State plans to be submitted by the States that submitted negative declarations. However, in the unlikely event that there are CISWI units located in these States, this Federal plan would automatically apply to such CISWI units.

¹ Similarly, the obligations of States and sources are unaffected by the reconsideration petition and the remand.

TABLE 2.—STATUS OF STATE PLANS

I. States With EPA-Approved State Plans

Alabama, Florida, Indiana, Mississippi, New Hampshire, West Virginia.

II. Negative Declaration Submitted to EPA

Arizona, Albuquerque in New Mexico, Clark County in Nevada, Colorado, Delaware, District of Columbia, Forsyth County in North Carolina, Kansas, Kentucky, Knox County in Tennessee, Maine, Maricopa County in Arizona, Mecklenburg County in North Carolina, Memphis/Shelby County in Tennessee, Missouri, Montana, New York, Nebraska, New Mexico, City of Philadelphia in Pennsylvania, Pima County in Arizona, Pinal County in Arizona, Rhode Island, South Dakota, Utah, Vermont, Virgin Islands, Washoe County in Nevada, Western County in North Carolina, Wyoming.

III. Final State Plan Submitted to EPA

Louisiana, Nashville/Davidson County in Tennessee, North Carolina, South Carolina, Puerto Rico.

IV. Draft State Plan Submitted to EPA

Allegheny County in Pennsylvania, Maryland, North Dakota, Ohio, Oklahoma, Virginia.

The EPA is currently reviewing final and draft State plans submitted by the States listed in parts III and IV of Table 2. The Federal plan covers CISWI in these States until these State plans are approved by the EPA and become effective. Other States are making significant progress on their State plans and we expect many State plans to be approved in the next several months. As our Regional Offices approve State plans, they will also, in the same action, amend the appropriate subpart of 40 CFR part 62 to codify their approvals. The EPA is not aware of any Indian Tribes that are developing Tribal plans.

The EPA will maintain a list of State plan submittals and approvals on our Air Toxics Web site at <http://www.epa.gov/ttn/atw/129/ciwi/ciwiipg.html>. The list will help CISWI owners or operators determine whether their CISWI is affected by a State plan, a Tribal plan, or the Federal plan. Owners and operators of CISWI units can also contact the EPA Regional Office for the State in which their CISWI units are located to determine whether there is an approved and effective State plan in place.

II. Affected Facilities

A. What Is a CISWI Unit?

A CISWI unit means any combustion device that combusts commercial and industrial waste, as defined in the final 40 CFR part 62, subpart III. Commercial and industrial waste is defined as solid waste combusted in an enclosed device using controlled flame combustion without energy recovery that is a distinct operating unit of any commercial or industrial facility (including field-erected, modular, and custom built incineration units operating with starved or excess air), or solid waste combusted in an air curtain

incinerator without energy recovery that is a distinct operating unit of any commercial or industrial facility. Fifteen types of combustion units, which are listed in section 62.14525 of subpart III are conditionally exempt from the Federal plan.

B. Does the Federal Plan Apply to Me?

The Federal plan applies to you if you are the owner or operator of a combustion device that combusts commercial and industrial waste (as defined in subpart III) and the device is not covered by an approved and effective State or Tribal plan as of December 1, 2002. The Federal plan covers your CISWI unit until the EPA approves a State or Tribal plan that covers your CISWI unit and that plan becomes effective.

If you began the construction of your CISWI unit on or before November 30, 1999, it is considered an existing CISWI unit and could be subject to the Federal plan. If you began the construction of your CISWI unit after November 30, 1999, it is considered a new CISWI unit and is subject to the NSPS. If you began reconstruction or modification of your CISWI unit prior to June 1, 2001, it is considered an existing CISWI unit and could be subject to the Federal plan. Likewise, if you began reconstruction or modification of your CISWI unit on or after June 1, 2001, it is considered a new CISWI unit and is subject to the NSPS.

Your CISWI unit is subject to this Federal plan if on November 3, 2003, the EPA has not approved a State or Tribal plan that covers your unit, or the EPA-approved State or Tribal plan has not become effective. The specific applicability of this plan is described in sections 62.14510 through 62.14531 of subpart III.

Once an approved State or Tribal plan is in effect, the Federal plan no longer applies to a CISWI unit covered by such plan. An approved State or Tribal plan is a plan developed by a State or Tribe that the EPA has reviewed and approved based on the requirements in 40 CFR part 60, subpart B to implement and enforce 40 CFR part 60, subpart DDDD. The State or Tribal plan is effective on the date specified in the notice published in the *Federal Register* announcing the EPA's approval of the plan.

Today's promulgation of the CISWI Federal plan does not preclude States or Tribes from submitting a plan. Once the EPA approves a State or Tribal plan, then the Federal plan will no longer apply to CISWI units covered by the State or Tribal plan as of the effective date of the State or Tribal plan. (See the discussion in "Federal Plan Becomes Effective Prior to Approval of a State or Tribal Plan" in section VII C of this preamble.) If a CISWI unit were to be overlooked by a State or Tribe and the State or Tribe submitted a negative declaration letter, or if an individual CISWI unit were not to be covered by an approved and effective State or Tribal plan, the CISWI unit would be subject to this Federal plan.

C. How Do I Determine if My CISWI Unit Is Covered by an Approved and Effective State or Tribal Plan?

Part 62 of Title 40 of the Code of Federal Regulations identifies the approval and promulgation of section 111(d) and section 129 State or Tribal plans for designated facilities in each State or area of Indian Country. However, part 62 is updated only once per year. Thus, if part 62 does not indicate that your State or Tribal area has an approved and effective plan, you

should contact your State environmental agency's air director or your EPA Regional Office (Table 1) to determine if approval occurred since publication of the most recent version of part 62.

III Elements of the CISWI Federal Plan

Since this Federal plan covers CISWI units located in States and areas of

Indian Country where plans are not yet in effect, the EPA has included in the Federal plan the same elements as are required for State plans: (1) Identification of legal authority and mechanisms for implementation, (2) inventory of CISWI units, (3) emissions inventory, (4) emission limitations, (5) compliance schedules, (6) waste management plan, (7) testing,

monitoring, inspection, reporting, and recordkeeping, (8) operator training and qualification, (9) public hearing, and (10) progress reporting. See 40 CFR part 60 subparts B and C and sections 111 and 129 of the CAA. Each plan element is described below as it relates to this CISWI Federal plan. Table 3 lists each element and identifies where it is located or codified.

TABLE 3.—ELEMENTS OF THE CISWI FEDERAL PLAN

Element of the CISWI federal plan	Location
Legal authority and enforcement mechanism	Sections 129(b)(3) 111(d) 301(a) and 301(d)(4) of the CAA
Inventory of Affected MWC Units	Docket A-2000-52
Inventory of Emissions	Docket A-2000-52.
Emission Limits	40 CFR 62.14630-62.14645
Compliance Schedules	40 CFR 62.14535-62.14575
Operator Training and Qualification	40 CFR 62.14595-62.14625
Waste Management Plan	40 CFR 62.14580-62.14590
Record of Public Hearings	Docket A-2000-52.
Testing, Monitoring, Recordkeeping, and Reporting	40 CFR 62.14670-62.14760
Progress Reports	Section III J of this preamble.

A. Legal Authority and Enforcement Mechanism

1. EPA's Legal Authority in States

Section 301(a) of the CAA provides the EPA with broad authority to write regulations that carry out the functions of the CAA. Sections 111(d) and 129(b)(3) of the CAA direct the EPA to develop a Federal plan for States that do not submit approvable State plans. Sections 111 and 129 of the CAA provide the EPA with the authority to implement and enforce the Federal plan in cases where the State fails to submit a satisfactory State plan. Section 129(b)(3) of the CAA requires the EPA to develop, implement, and enforce a Federal plan within two years after the date the relevant emission guidelines are promulgated (by December 1, 2002, for CISWI units). Compliance with the emission guidelines cannot be later than five years after the relevant emission guidelines are promulgated (by December 1, 2005, for CISWI units).

2. EPA's Legal Authority in Indian Country

Section 301 of the CAA provides the EPA with the authority to administer Federal programs in Indian Country. See sections 301(a) and (d). Section 301(d)(4) of the CAA authorizes the Administrator to directly administer provisions of the CAA where Tribal implementation of those provisions is not appropriate or administratively not feasible. See section VII E of this preamble for a more detailed discussion of the EPA's authority to administer the CISWI Federal plan in Indian Country.

This Federal plan is being promulgated under the legal authority of the CAA to implement the emission guidelines in those States and areas of Indian Country not covered by an approved plan. As discussed in section VII of this document, implementation and enforcement of the Federal plan may be delegated to eligible Tribal, State, or local agencies when requested by a State, eligible Tribal, or local agency, and when the EPA determines that such delegation is appropriate.

B. Inventory of Affected CISWI Units

The Federal plan includes an inventory of CISWI units affected by the emission guidelines (See 40 CFR 60.25(a)). Docket number A-2000-52 contains an inventory of the CISWI units that may potentially be covered by this Federal plan in the absence of State or Tribal plans. This inventory contains 99 CISWI units in 30 States and one protectorate. It is based on information collected from State and Federal databases, information collection request survey responses, and stakeholder meetings during the development of the CISWI emission guidelines. The EPA recognizes that this list may not be complete. Therefore, sources potentially subject to this Federal plan may include, but are not limited to, the CISWI units listed in the inventory memorandum in docket number A-2000-52. Any CISWI unit that meets the applicability criteria in the Federal plan rule is subject to the Federal plan, regardless of whether it is listed in the inventory.

C. Inventory of Emissions

The Federal plan includes an emissions estimate for CISWI units subject to the emission guidelines. (See 40 CFR 60.25(a)). The pollutants to be inventoried are dioxins/furans, cadmium (Cd), lead (Pb), mercury (Hg), particulate matter (PM), hydrogen chloride (HCl), oxides of nitrogen (NO_x), carbon monoxide (CO), and sulfur dioxide (SO₂). The EPA has estimated the emissions from each known CISWI unit that potentially may be covered by the Federal plan for the nine pollutants regulated by the Federal plan.

The emissions inventory is based on available information about the CISWI units, emission factors, and typical emission rates developed for calculating nationwide air impacts of the CISWI emission guidelines and the Federal plan. Refer to the inventory memorandum in docket number A-2000-52, item number II-B-3 for the complete emissions inventory and details on the emissions calculations.

D. Emission Limitations

The Federal plan includes emission limitations. (See 40 CFR 60.24(a)). Section 129(b)(2) of the CAA requires these emission limitations to be "at least as protective as" those in the emission guidelines. The emission limitations in this Federal plan are the same as those contained in the emission guidelines. (See Table 1 of subpart III.) Section V of this preamble discusses the emission limitations and operating limits. Table 2 of subpart III contains operating limits for wet scrubbers.

E. Compliance Schedules

Increments of progress are required for CISWI units that need more than 1 year from State plan approval to comply, or in the case of the Federal plan, more than 1 year after promulgation of the final Federal plan. (See 40 CFR 60.24(e)(1).) Increments of progress are included to ensure that each CISWI unit needing more time to comply is making progress toward meeting the emission limits.

For CISWI units that need more than 1 year to comply, the Federal plan includes in its compliance schedule two increments of progress from 40 CFR 60.21(h), as allowed by 40 CFR 60.24(e)(1) and required by 40 CFR part 60, subpart DDDD (§ 60.2575). The Federal plan includes defined and enforceable dates for completion of each increment. These increments of progress are (1) submit final control plan, and (2) achieve final compliance. The increments of progress are described in section V E of this preamble.

F. Waste Management Plan Requirements

A waste management plan is a written plan that identifies both the feasibility and the methods used to reduce or separate certain components of solid waste from the waste stream to reduce or eliminate toxic emissions from incinerated waste. The waste management plan must be submitted no later than April 5, 2004. Sections 62.14580 through 62.14590 of subpart III contain the waste management plan requirements.

G. Testing, Monitoring, Recordkeeping, and Reporting

The Federal plan includes testing, monitoring, recordkeeping, and reporting requirements (See 40 CFR 60.25.) Testing, monitoring, recordkeeping, and reporting requirements are consistent with subpart DDDD, and assure initial and ongoing compliance.

H. Operator Training and Qualification Requirements

The owner or operator must qualify operators or their supervisors (at least one per facility) by ensuring that they complete an operator training course and annual review or refresher course. Sections 62.14595 through 62.14625 of subpart III contain the operator training and qualification requirements.

I. Record of Public Hearings

The proposed Federal plan provided opportunity for public participation in adopting the plan. No requests for a

public hearing were received by the EPA.

J. Progress Reports

Under the Federal plan, the EPA's Regional Offices will prepare annual progress reports to show progress of CISWI units in the Region toward implementation of the emission guidelines. (See 40 CFR 60.25(e).) States or Tribes that have been delegated the authority to implement and enforce this Federal plan are also required to submit annual progress reports to the appropriate EPA Regional Office.

Each progress report must include the following items: (1) Status of enforcement actions; (2) status of increments of progress; (3) identification of sources that have shut down or started operation; (4) emission inventory data for sources that were not in operation at the time of plan development, but that began operation during the reporting period; (5) additional data as necessary to update previously submitted source and emission information; and (6) copies of technical reports on any performance testing and monitoring.

IV. Significant Issues and Changes Since Proposal

A. Applicability of the Standards

A commenter (IV-D-05) representing electric utilities providing service to more than 95% of the nation's consumers of electricity commented in support of proposed rules. In particular, the commenter endorsed the EPA's proposed definitions of "commercial and industrial solid waste incineration unit" and the corresponding definition of "commercial and industrial waste." The commenter said that, taken together, these two definitions will ensure that the proposed Federal plan requirements do not inadvertently encompass combustion units, including electric utility boilers, that burn materials for energy recovery. The commenter amplified this endorsement noting his organization's opinion that the proposed rules clarify that the section 129 program was not intended by Congress to encompass electric utility boiler combustion practices, including those circumstances where electric utility boilers co-combust non-hazardous solid waste with fossil fuels during normal production operations. According to the commenter, it was clear from the legislative history of section 129 that Congress meant only for the EPA to regulate units whose primary function is to incinerate nonhazardous solid waste, not electric utility boilers that co-combust small amounts of

nonhazardous waste with fuel during the production of electric power. The commenter sought to underscore that, for purposes of this rulemaking, the EPA correctly adopted the same definitions of CISWI and commercial and industrial waste incorporated in the EG, thereby excluding from the CISWI Federal plan combustion units, including electric utility boilers, that engage in energy recovery.

The EPA notes that a comment letter endorsing a proposed action typically requires no response on our part. Here, we remind the reader that after promulgating the final rule establishing the NSPS and the EG for the CISWI category, the EPA received and granted a petition for reconsideration related specifically to the definition of "commercial and industrial solid waste incineration unit." Thus, the EPA will undertake additional notice and comment proceedings related to this definition. Additionally, as discussed above, the EPA accepted a voluntary remand (without vacature) on the underlying NSPS and EG in connection with a petition for review filed in the Federal Court of Appeals for the D.C. Circuit. We clearly acknowledged this fact also in the proposal for this Federal plan. The EPA intends to take final action on this definitional issue in conjunction with the EPA's response to the remand. As we noted at proposal, however, since the current EG remain in effect, we have proceeded to develop a Federal plan as required by section 129(b)(3) of the CAA.

Since the Federal plan must mirror the substantive requirements of the EG, we will promulgate a Federal plan which includes the definitions endorsed by the commenter. To the extent that we might take action in the future that results in changes to the definitions in the underlying CISWI EG, we will simultaneously propose amendments to the Federal plan to reflect any such changes. If changes become necessary, interested parties, including the commenter, will have the opportunity to provide comments. We will reasonably accommodate concerns of commenters as appropriate.

One commenter (IV-D-01) representing a State air pollution control agency noted a discrepancy between the proposed Federal plan and EG requirements for air curtain incinerators (ACI) regarding the types of wastes qualifying for the exemption of ACI from CISWI emission limits. The commenter observed that the proposed plan specifies certain requirements if the ACI's burn only 100 percent wood waste and clean lumber. By contrast, the EG and NSPS specify certain

requirements if the ACI burn 100 percent wood waste, 100 percent clean lumber, or 100 percent wood waste, clean lumber, and/or yard waste. The commenter asked that the EPA explain and correct the discrepancy as appropriate.

We agree that the commenter's observation was correct. The proposed regulatory language has been amended to duplicate the applicability of the EG. Further, a definition of yard waste has been included to provide clarity on the meaning of the term "yard wastes" for the purposes of this Federal plan. The term "yard wastes" as defined in the final rule for the CISWI Federal plan includes the excluded wastes listed in paragraph (1) of the definition of "wood waste" in § 62.14840 of the rule. This definition of "yard wastes" is consistent with the one previously promulgated in the NSPS for large municipal waste combustors (40 CFR Part 60 Subpart Eb). Overall, these changes will make the final rule better comport to the language in section 129(g)(1) of the CAA.

One commenter (IV-G-01) supports the rationale behind the exemption in §§ 62.14525(n)(7) and 62.2555(n)(7) which exempts "Units burning only photographic film to recover silver." However, the commenter believes that for this exemption to be effective, it should be broadened to cover photographic materials, since there is a broad range of photographic materials that are burned together to recover silver. These materials include, not only film, but paper, filters, sludges and other photosensitive materials. Accordingly, the commenter recommended changing the wording of § 62.14525(n)(7) to read as follows: "(7) Units burning only photographic materials to recover silver."

Another commenter (IV-G-04) requested a similar change to the draft rules to formalize an exemption for carbon regeneration furnaces used in the corn wet milling industry. He asked for the proposed rule to be amended to reflect the EPA's granting of a petition for exemption of these sources on September 24, 2002. To accomplish this purpose, we were asked to add language to § 62.14525(n) reading as follows: "Units burning contaminants adsorbed by spent activated carbon when the spent carbon is being regenerated for reuse in manufacturing processes."

While EPA understands the basis for both comments, in light of section 129(g) of the CAA, we do not believe that adopting additional specific exemptions in the Federal Plan is the appropriate approach. First, the appropriate mechanism for requesting exemptions beyond those expressly

provided for in the EG is the petition process described in § 60.2025 of the NSPS and § 60.2558 of the EG. Second, we do not believe that it is appropriate to list in the Federal plan each exemption that EPA approves under these provisions. We are concerned that making the requested changes would cause a discrepancy between the express applicability of the EG and the Federal plan. To avoid such discrepancies, the EPA would need to simultaneously amend the Federal plan and the EG each time we approve a new exemption under § 60.2558. However, each change in the Federal plan for new exemptions would cause the Federal plan to differ from State plans.

To appropriately account for exemptions approved under §§ 60.2025 and 60.2558, while ensuring that the Federal plan is consistent with the requirements of the EG, we have amended the final rule to include a new paragraph 62.14525(n)(8). This provision exempts from the Federal plan sources which are granted exemptions from the NSPS and EG through the petition process. Thus, in order to secure an exemption from the Federal plan requirements based on a facility's status as a chemical recovery unit, the facility need only apply for and receive an exemption under the appropriate provision of the NSPS or the EG. Accordingly, we have also re-drafted § 62.14530 to advise owners/operators of chemical recovery units not listed in paragraph 62.14525(n) of the appropriate method to request exemptions.

We received comment (IV-D-03) from an operator of CISWI units in Alaska who requested changes to the proposed rules to fit circumstances deemed unique to operation of the Alaskan pipeline. The commenter suggested that a lower size cutoff should be added to the final rule to reflect the economic impacts of installing emission controls in very remote locations. The commenter further requested outright exemption of emergency-use CISWI. The primary concern given was elimination of non-hazardous debris from the cleanup of large oil spills. The commenter noted that for large oil spill response operations, incinerators would be a valuable form of equipment to environmentally and safely dispose of large amounts of boom, sorbent pads, and personal protective equipment employed in a clean-up. He said that land-filling such materials is not a viable option because of the remote locations. He considered bagging and shipping such waste away from the locale of a spill infeasible and was not aware of any Alaskan facilities that

could handle the large volumes of oily waste they'd receive. While requesting that the EPA include in the final Federal plan an exemption for emergency use CISWI, the commenter would not object to establishment of minimal standards such as unit capacity limitations in such an exemption.

We see section 129(a) of the CAA providing discretion to consider cost, non-air health and environmental impacts and energy requirements in the establishment of emission standards for CISWI. However, the EPA may not consider such factors in establishing the minimum stringency for controls under section 129(a)(2). Moreover, Section 129 does not permit the EPA to exclude incinerators from coverage under the regulations based on the size of the incinerator unit. Finally, the emission limits for CISWI units were established in the manner prescribed by law for determining that minimal level during development of the EG. The function of this Federal plan is not to make substantive changes to those requirements, but to implement those requirements in States that do not adopt State plans. Section 129(b) requires us to include in the Federal plan all provisions of the guidelines. Thus, it would be inappropriate to change this Federal plan in the manner requested by the commenter.

B. Compliance Schedule

Two commenters (IV-D-02, IV-G-02) asked us to revise the compliance schedule for existing CISWI units subject to Federal plan to be consistent with the compliance schedule provided in the EG. Both cited section 60.2535 of the CISWI EG, wherein the regulation requires compliance "as expeditiously as practicable," or by the earlier of two dates: three years after the effective date of State plan approval or by December 1, 2005. Both noted, however, that section 62.14535 of the proposed Federal plan provides only one year after promulgation of the CISWI Federal plan for final compliance. One writer asked us to synchronize the compliance dates for CISWI units, whether they are regulated under a State plan or the Federal plan. The other expressed concern that similar units in different States may have different compliance dates. We were asked to revise the Federal plan to require compliance as expeditiously as practicable, but not later than the earlier date of December 1, 2005, or three years after promulgation of the Federal plan.

In reply, we note our expectation that schedules for combustion units subject to section 129 requirements should differ. Because compliance schedules

are often tied to the time of State plan approval, most State plans will have differing compliance dates. Hence, State plans and Federal plans are not expected to have the same compliance dates for a given category of sources. Furthermore, State plans and the Federal plan have the obligation to require compliance "as expeditiously as practicable." This is specifically required in section 129(f)(2) of the CAA as well as in 40 CFR 60.24(c) and may be sooner than the worst case dates identified in the emission guidelines.

State plans were due on December 1, 2002. If a State or Tribe with existing CISWI units did not submit an approvable plan by December 1, 2002, sections 129 and 111 of the CAA require the EPA to develop, implement, and enforce a Federal plan for units located in that State or Tribal area. By developing the Federal plan, we assumed the burden of implementing the EG for CISWI units not covered by an approved and effective State or Tribal plan. In the Federal plan, as in a State plan, the implementing agency has the discretion to apply an appropriate compliance schedule to the source category. In the case of the Federal plan, we developed our schedule to achieve compliance with provisions of the EG as expeditiously as practicable, based on the feasibility of owners or operators to retrofit combustion units with air pollution control devices.

Mindful of the requirements of section 129(f)(2), we examined the feasibility for owners or operators to retrofit combustion units with air pollution control devices prior to proposal. Based upon similarities in size and upon examination of eight case studies (Docket No. A-98-24, II-A-1) of hospital medical infectious waste incineration (HMIWI) units that completed retrofits of types of controls needed to meet the HMIWI Federal plan, we chose to require compliance within one year after publication of the final CISWI Federal plan. Our rationale for the compliance schedule is discussed fully in the proposal preamble at 67 FR 70646.

Implementation of the EG and Federal plans for HMIWI have shown that our expectations were well-founded. We concluded that CISWI owners and operators could meet the final compliance date just as promptly and efficiently. Also, we noted that in addition to the one year extension provision of the Federal plan, owner/operators could have used the time between promulgation of the final CISWI EG (or proposal of the Federal plan) and promulgation of this Federal plan to plan and begin retrofits.

However, the EPA expects that some CISWI units could need more than one year to comply, as did some HMIWI units, due to site-specific circumstances. For units that may have more complex retrofits or constraints that prevent them from complying within one year, the Federal plan establishes increments of progress and those units must comply within two years.

Thus, we will retain the proposed compliance schedule in the final CISWI Federal plan. Existing CISWI units must comply within one year after publication of the final rule in the Federal Register or meet increments of progress and comply within two years after publication of the final rule in the Federal Register.

We received a request (IV-G-02) to clarify the compliance schedule for CISWI units that may lose the rule exemption provided in § 62.14525(n)(4) after the effective date of the rule. Section 62.14525(n)(4) exempts chemical recovery units burning only manufacturing byproduct streams/residues containing catalyst metals which are reclaimed and reused as catalysts or used to produce commercial grade catalysts. The commenter owns an operating site which he believes qualifies for an exemption from the requirements of the CISWI Federal plan because catalyst metals in incinerator fly ash are reclaimed off site or used in making commercial grade catalysts. The commenter is concerned about the potential unavailability of an off-site reclamation facility and requested that we provide at least three years after the loss of his expected rule exemption for final compliance with the rule requirements.

As outlined above and in the preamble to the proposed rule, we respond by stating our expectation that most CISWI units will reach final compliance promptly and efficiently. Those CISWI units that become exempt through §§ 62.14525 and 62.14530 of the Federal plan, but lose that exemption after the compliance date of the Federal plan, must begin complying with the requirements of the Federal plan immediately upon loss of the exemption. Moreover, section 129(b)(3) requires that all CISWI units must be in compliance with the requirements of a State or Federal plan no later than five years after promulgation of the emission guidelines, which is December 1, 2005. Therefore, we would not have the authority to allow a compliance date three years after loss of an exemption, as suggested by the commenter.

If owners or operators of affected CISWI units anticipate that they will not be exempt in the future, we encourage

them to begin plans for installation of any controls needed to meet the CISWI emission limits. According to this final Federal plan, owners or operators are required to either: (1) Reach final compliance by the date one year after publication of this final rule in the Federal Register; or (2) meet increments of progress and reach final compliance by the date two years after publication of this final rule in the Federal Register. The final compliance schedule and increments of progress are contained in §§ 62.14535 through 62.14575 of the final CISWI Federal plan. Therefore, any unit that loses its exemption after the applicable compliance date (one year from publication of this final Federal plan, or if a facility has met all the requirements related to increments of progress, two years after the publication of this final Federal Plan) must meet the applicable standards as of the date that it loses its exemption. Similarly, if a facility loses an exemption prior to the applicable compliance date, the facility must meet the required standards as of the compliance date.

The same commenter (IV-G-02) opined that the proposed petition requirements in § 62.14536 for one year compliance extensions are unnecessary. He said that the CISWI EG include no corresponding requirement for compliance extensions beyond meeting the two increments of progress. The commenter believes the increment of progress requirements in proposed § 62.14540 are sufficient and requested that EPA remove the proposed requirements in § 62.14536.

We disagree. To develop the CISWI Federal plan, we must determine how to fill in implementation details not spelled out in the EG or subpart B, including how and when to grant compliance extensions (as must States when developing State plans). The EG provide a framework for implementation, but some details need to be developed through implementation plans. Paragraph 129(f)(2) requires that the EG be applied as expeditiously as practicable. Our prior experience with similar sources shows that requiring compliance within 12 months of promulgation of the final rule is generally achievable and this is reflected in the proposed rule. Prior experience also shows that, in some instances, site-specific concerns can make a one year compliance schedule impracticable and that is also reflected in the proposed one year extension of the compliance date. Some criteria are needed to guide the EPA and the regulated community as to when it would be appropriate to allow extra time for sources to achieve final

compliance and how to accomplish this procedurally. The Federal plan is being implemented under the legal authority of section 111 as well as section 129. For plans to implement EG under section 111 of the CAA, the broad procedural approach to be followed is given in the Code of Federal Regulations at 40 CFR part 60, subpart B. Specifically, paragraphs 60.24(f)(1) to (3) provide criteria for resolving the question of how to decide when it is appropriate to allow affected facilities additional time to achieve compliance. In particular, there must be a determination that meeting the initial compliance date would be unreasonably costly, physically impossible, or otherwise unreasonable. The petition requirements in § 62.14536 for sources to request one-year compliance extensions were included in the proposed rule for the express purpose of addressing these requirements.

We have consistently advised States developing State plans to look to the HMIWI Federal plan for guidance regarding a detailed process for addressing compliance extensions. Similarly, we are following the general procedural approach of the HMIWI Federal plan for the CISWI Federal plan. Our decision to take this path was based upon the knowledge that the HMIWI Federal plan approach had previously undergone notice and comment and that its efficacy had been tested in practice through implementation of the HMIWI Federal plan. Thus, we believe that the proposed criteria for compliance extensions constitute a reasonable and appropriate solution to a known problem and are leaving those criteria in the final rule.

The same commenter (IV-G-02) asked us to revise the performance test timing requirements in § 62.14665 to allow at least 180 days after final compliance date for the initial performance test. He claimed that 90 days after the final compliance date would be insufficient time to coordinate the operations and emissions test schedules and complete the final performance test. He noted that § 60.2705 of the CISWI emissions guidelines allows CISWI units subject to a State plan up to 180 days after the final compliance date for conducting an initial performance test. The commenter believes the performance test timing requirements for the CISWI units subject to Federal plan should be consistent with the performance test timing requirements for the CISWI units subject to a State plan. The commenter noted that such a change would make the CISWI Federal plan consistent with the CISWI emission guidelines.

The 180-day time period to conduct compliance testing originated in the 1970s, when industry commented that there were not enough qualified testers to perform the surge of testing that was expected as the original major rules took effect. At the time, there was enough credibility to the argument that rule writers allowed a full 180 days (6 months) to conduct compliance testing. This then became a common allowance in subsequent NSPS and EG. Under this Federal plan, there are relatively few CISWI units to be tested, qualified testers are abundant, and there is sufficient lead time for CISWI owners and operators to coordinate operations and emissions testing.

While, as the commenter observes, the EG allow States to give sources up to 180 days after the final compliance date to complete performance testing, 180 days is the maximum amount of time that may be allowed. Implementing authorities may require performance testing more quickly. As discussed above, sufficient test equipment and personnel are available. In this case, the EPA expects that 90 days is appropriate and sufficient time to coordinate the operations and emissions test schedules and complete the final performance test.

This approach has the advantage of reducing the duration of the period of uncertainty about compliance status between the actual compliance date and the time that a final test report has been submitted and approved. While sources are liable for their compliance, or lack thereof, from the compliance date onward, there exists a time of uncertainty until testing has been completed and approved by all relevant parties. Since the proposed plan allows sources two months following the initial performance test to submit test reports, the actual period of uncertainty over compliance status is potentially eight months with a 180 day testing delay. Should a source fail its performance test, it is immediately subject to enforcement consequences for its actions dating from the compliance date until such time as a performance test is successfully passed. However, the task of the agency responsible for enforcement is complicated by forced reliance upon a combination of data obtained at an unsuccessful performance test and data obtained from continuous monitoring systems. In developing the Federal plan, we have sought to reduce the potential negative impacts associated with this period of uncertainty. At the same time, we are not entirely satisfied that the complete elimination of a delay in performance testing after the compliance date is appropriate and, hence, we proposed a

three month period. In this specific case, some sources may receive compliance extensions allowing up to two years from the date of publication of the this final rule. It seems reasonable that such sources would have more than enough time to arrange and complete performance testing ahead of their extended compliance date. For most sources, which will spend the next year planning and installing emission control systems, we concluded that some additional time after the compliance date may be needed to complete performance testing. Thus, we have retained the requirement to conduct the initial performance test no later than 90 days after the final compliance date. In doing so, we have balanced the need for timely assurance of compliance with the practicalities of scheduling and completing performance testing.

C Air Curtain Incinerators

We received two statements of opinion arguing against requiring title V operating permits for air curtain incinerators (ACI). One commenter (IV-D-01) representing a State air pollution control agency noted that the proposed rules were clearly written to specify that ACI would be required to obtain title V operating permits. He correctly observed that the EG and the NSPS do not specify that ACI should obtain a title V permit and requested that we change the final rule language in the Federal plan to read the same as EG and NSPS. He went on to express his opinion that doing so would result in ACI not being permitted under title V. This would be acceptable to the commenter who expressed his belief that the CAA does not require existing ACI (which burn only the particular wastes specified under the CAA) to operate under a title V permit. He presented a rationale for this belief. He first noted that section 129 of the CAA provides for State plans (and Federal plans) for CISWI under the combined authority of sections 129 and 111 of the CAA. His rationale first quotes section 129(g) of the CAA which states that the term "solid waste incineration unit" does not include, among other things, "air curtain incinerators provided that such incinerators only burn wood wastes, yard wastes and clean lumber and that such air curtain incinerators comply with opacity limitations to be established by the Administrator by rule."

His next step is to focus upon the language specific to title V operating permits in section 129(e) wherein the CAA states "Beginning (1) 36 months after the promulgation of a performance standard under subsection (a) and

section 111 *applicable to a category of solid waste incineration units*, or (2) the effective date of a permit program under title V in the State in which the unit is located, whichever is later, *each unit in the category shall operate pursuant to a permit issued under this subsection and title V.*" (Emphasis added by commenter) He then combines the two passages cited to conclude that, "by definition, ACIs are not solid waste incineration units as long as they burn only the wastes which are narrowly defined in the Act. Therefore, ACIs are not required to operate under a title V permit."

A second State pollution control agency (IV-G-03) echoed the preceding rationale and conclusions.

We respond by first saying that we were specific in the proposal about the need for title V permits for ACI subject to the Federal plan for the purpose of clarifying that need. We did so in order to clearly present the Agency's view of these sources' title V obligations, and to answer questions such as those voiced by the commenter resulting from the absence of such specific language in the EG and NSPS. The Agency has consistently maintained that operating permits are needed for ACI subject to the NSPS and to State plans drafted pursuant to the EG. However, communications we have received since promulgation of the EG and NSPS pointed to the advisability of specifically clarifying the matter in the preamble to the Federal plan and in the rule itself. Thus, to facilitate the application of title V to these sources, we have specifically included in this Federal plan language describing the need for title V operating permits.

We disagree with the commenters' conclusion that ACI subject to the CISWI Federal plan need not obtain title V operating permits. As noted by the commenters, section 129 directs the Agency to develop requirements for ACI under the authority of section 111, as well as section 129. Thus, there are two potential origins of title V obligations: Section 129(e) and section 502(a). Accordingly, even if section 129(e) were not applicable, sources would clearly still be subject to title V, based on the general obligation for all sources subject to rules written under the authority of section 111 to have operating permits. Thus, all ACI subject to State plans, Federal plans, or NSPS must obtain title V operating permits.

With regard to the question of when such permit applications are due, we believe that the Act provides sufficient discretion for the Agency to require title V permit applications for ACI in a manner that is consistent with the

obligations of other sources regulated under section 129 and 111. While paragraph 129(g) clearly contemplates exempting certain ACI from the substantive emission standards under paragraphs 129(a) and (b), it is less clear what impact this limited exemption has on such sources' obligations under title V. In general, it is clear that section 129 is meant to apply to ACI; either in full for those ACI that do not meet the limited criteria of the section 129(g) exemption, or in a more limited fashion (including opacity standards) for those ACIs that qualify for the section 129(g) exemption. For ACIs subject to the opacity standards that EPA adopts under this section, the applicability of the 129(e) title V requirements are made somewhat ambiguous by the wording of paragraph 129(g). However, having established that title V operating permits for ACI are required as a matter of law (under either 129(e) or 502(a)), we believe that it is a reasonable exercise of the Agency's discretion to require all covered ACI (including those subject to the section 129/111 opacity standards) to apply for title V permits within the period of time permitted by section 129(e). We believe that the intent of section 129 is best served by maintaining consistency in the title V obligations among the universe of sources regulated under this section, thereby ensuring that the contemplated emissions reductions are achieved expeditiously for each category of sources regulated under this section. Moreover, for ACIs subject only to section 129/111 opacity standards, permit applications should be simpler to prepare than for sources subject to full regulation under the section 129 emission standards. Thus, the EPA is retaining the requirement for all sources regulated under section 129/111 (including ACI) to submit title V operating permit applications within the time frame described in section 129(e). Consistent with this requirement, a detailed explanation of when sources regulated under section 129/111 (again, including ACI) must apply for a title V permit, whether subject to a State plan, Federal plan, or NSPS, can be found in Table 6 included in section VIII of the preamble (titled "Title V Operating Permits").

One of the State agency commenters (IV-G-03) also questioned the utility of requiring title V operating permits for ACI. He said that if ACI are operated properly, the opacity requirement is easily achieved and the Federal plan and the CISWI EG/NSPS rules appear to require nothing more than for the units to operate normally. If such were the

case, he would see requiring ACI to obtain title V operating permits to be a very protracted administrative effort that would achieve no air quality benefits.

As we discussed above, we have concluded that ACI need to obtain title V permits. However, we do not believe that the process for ACI to obtain title V operating permits needs to be as burdensome as suggested by the commenter. In terms of the burden of permitting, it is worth noting that there are only a minimal number of requirements in the Federal plan which apply to those ACI which burn 100% wood wastes, clean lumber, and/or yard waste. And, as noted by the commenter, these requirements are straightforward. Therefore, these requirements should not be difficult to incorporate into a title V application or permit.

In terms of air quality benefits, we believe that title V permits provide air quality benefits by helping to ensure that sources comply with the requirements to which they are subject. Title V requirements help ensure compliance with applicable requirements in a number of ways. For example, title V regulations at 40 CFR part 70 and 71 require sources to self-certify compliance with applicable requirements initially and annually, require sources to promptly report deviations from a permit, and require that title V permits contain monitoring sufficient to assure compliance. This last requirement may necessitate that additional monitoring be added to a permit to supplement the monitoring required by the relevant applicable requirement. In short, title V operating permit requirements can enhance the effectiveness of rules such as this Federal plan. In terms of this particular rule, a title V permit will help ensure that an ACI operates within the parameters established by the Federal plan whether it burns 100% wood wastes, clean lumber, and/or yard waste, or whether it burns other wastes and becomes subject to all of the requirements in the Federal plan.

The commenter also noted the number of exemptions resulting in negative declarations for CISWI and the similarly structured small municipal waste combustors (small MWC) rule. He was of the opinion that since both the CISWI rule and the small MWC rule have numerous exemptions for a wide variety of sources, most states have few if any sources covered by them. As an example, he said his State submitted negative declarations for the small MWC rule and many more States submitted negative declarations for the CISWI rule. In his State, out of hundreds of potential

sources, due to the number of exemptions, they found just nine units affected by the combined rules, all of which were ACI. Since, in his opinion, the Federal plan will simply require these units to operate normally, he questioned the efficacy of expending so much effort on these series of rules.

The significance of the commenter's observations regarding negative declarations is unclear. Although the number of sources ultimately regulated by these rules may be less than expected in some States, significant emissions reductions are being achieved throughout the country through the implementation of these rules.

D. Delegation of Authority

A State air pollution control agency (IV-D-04) expressed concerns about the EPA's general approach to delegating authority and about specific aspects of the proposed plan. The commenter pointed to perceived inconsistencies in a number of NSPS and Federal plans and suggested the proposed plan would contribute to a pattern of inconsistency. Specific to the proposed CISWI Federal plan, the commenter observed that an inspector would need to carry around a copy of the proposal preamble in addition to the Code of Federal Regulations (CFR) because the delegation of authority provisions were placed in the preamble instead of following the previously established practice of including them in the CFR. In addition, the commenter listed specific questions about the differences in retained authorities in the CISWI NSPS and the proposed CISWI Federal plan. He posited that the EPA's general inconsistency combined with the specifics of the proposal impede the

efforts of compliance inspectors. The commenter recommended an approach for the EPA to use in promulgating this Federal plan and other regulations concerning the section 129 and section 111 programs. He asked that the provisions concerning delegation of authority should be promulgated as part of the regulation and published in the CFR. They should be written so as to use the same words to express the same meaning and be based upon a consistent policy as to the provisions that are not allowed to be delegated.

Our overall response is that we delegate as much authority as possible, consistent with Congress' intent that States, Tribes, and local agencies take the primary responsibility for ensuring that the emission limitations and other requirements in the emission guidelines are achieved (as discussed at 67 FR 70647). We do withhold delegation of authorities that may have an effect on the stringency of a standard. The EPA permits delegation to a State or local agency of all the Administrator's authorities under 40 CFR part 60, except those that require rulemaking to implement, that affect the stringency of the standard, or where national oversight is the only way to ensure national consistency. In the CISWI source category, as well as the other categories cited by the commenter, authorities that could affect the stringency of the standard include approval of alternative emission standards and operating limits; alternatives to test methods; and alternatives to monitoring, recordkeeping, and reporting. For section 111 rules, these authorities are specifically listed in the general

provisions of 40 CFR part 60 as authorities not to be delegated. Because each source category is different, many individual sections of 40 CFR part 60 specifically indicate that certain authorities may not be delegated. Thus, although we generally withhold delegation of these same authorities (such as approval of test methods, alternative emission standards) in the Federal plans, we customize the list for each source category to ensure that the stringency of the standard for that category is not jeopardized.

In response to the commenter's specific concern about our proposed rule, we revised the rule to assure that the provisions concerning delegation of authority will be codified in the CFR. In addition to including the delegation of authority provisions in the regulation, we revised the delegation of authority language to more closely match the equivalent sections in the NSPS. By using parallel language within the CISWI source category, we expect the requirements of the CISWI Federal plan to be more clear to State compliance inspectors. In addition, using the same language promotes consistent application of requirements for new CISWI units affected by the NSPS and existing CISWI units affected by the Federal plan.

V. Summary of CISWI Federal Plan

A. What Emission Limitations Must I Meet?

As the owner or operator of an existing CISWI unit, you will be required to meet the emission limitations specified in Table 4. See section V E of this preamble for a discussion of the compliance schedule

TABLE 4.—EMISSION LIMITATIONS FOR EXISTING CISWI UNITS

For these pollutants	You must meet these emission limitations ^a	And determine compliance using these methods ^b
Cadmium	0.004 mg/dscm	EPA Method 29.
Carbon Monoxide	157 ppm	EPA Methods 10, 10A, or 10B.
Dioxins/Furans, toxic equivalent (TEQ) basis	0.41 ng/dscm	EPA Method 23.
Hydrogen Chloride	62 ppm by dry volume	EPA Method 29.
Lead	0.04 mg/dscm	EPA Method 29.
Mercury	0.47 mg/dscm	EPA Method 29.
Opacity	10 percent	EPA Method 29.
Oxides of Nitrogen	388 ppm by dry volume	EPA Method 7, 7A, 7C, 7D, or 7E.
Particulate Matter	70 mg/dscm	EPA Method 5 or 29.
Sulfur Dioxide	20 ppm by dry volume	EPA Method 6 or 6c.

^a All emission limitations (except opacity) are measured at 7 percent oxygen, dry basis at standard conditions.

^b These methods are in 40 CFR part 60, appendix A.

B. What Operating Limits Must I Meet?

If you are using a wet scrubber to comply with the emission limitations,

you must establish the maximum and minimum site-specific operating limits indicated in Table 5. You must operate

the CISWI unit and wet scrubber so that the operating parameters do not deviate from the established operating limits.

TABLE 5.—OPERATING LIMITS OR EXISTING CISWI UNITS USING WET SCRUBBERS

For these operating parameters	You must establish these operating limits	And monitor continuously using these recording times
Charge rate	Maximum charge rate	Every hour.
Pressure drop across the wet scrubber, or amperage to the wet scrubber.	Minimum pressure drop or amperage	Every 15 minutes.
Scrubber liquor flow rate	Minimum flow rate	Every 15 minutes
Scrubber liquor pH	Minimum pH	Every 15 minutes.

Note: Compliance is determined on a 3-hour rolling average basis except charge rate for batch incinerators, which is determined on a daily basis

If you are using an air pollution control device other than a wet scrubber to comply with the emission limitations, you must petition the Administrator for other site-specific operating limits to be established during the initial performance test and continuously monitored thereafter. The required components of the petition are described in § 62.14640 of subpart III.

If you are using a fabric filter to comply with the emission limitations, in addition to other operating limits as approved by the Administrator, you must operate the fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during any 6-month period.

C. What Are the Requirements for Air Curtain Incinerators?

The Federal plan establishes opacity limitations for air curtain CISWI units burning 100 percent wood wastes, clean lumber, and/or yard wastes. This opacity limitation is 10 percent, except 35 percent opacity is allowed during start-up periods that are within the first 30 minutes of operation.

D. What Are the Testing, Monitoring, Inspection, Recordkeeping, and Reporting Requirements?

The owner or operator of a CISWI unit subject to the CISWI Federal plan must conduct initial performance tests for cadmium, dioxins/furans, hydrogen chloride, lead, mercury, opacity, particulate matter, and sulfur dioxide and establish operating limits (*i.e.*, maximum or minimum values for operating parameters). The initial performance test must be conducted within 90 days after the date the facility is required to achieve final compliance.

The owner or operator must conduct annual performance tests for particulate matter, hydrogen chloride, and opacity. (An owner or operator may conduct less frequent testing if the facility demonstrates that it is in compliance with the emission limitations for 3 consecutive years.)

To assure ongoing achievement of the Federal plan's provisions, an owner or

operator using a wet scrubber to comply with the emission limitations will continuously monitor the following operating parameters: Charge rate, pressure drop across the wet scrubber (or amperage), and scrubber liquid flow rate and pH. If something other than a wet scrubber is used to comply with the emission limitations, the owner or operator must monitor other operating parameters, as approved by the Administrator.

If the owner or operator is using a fabric filter to comply with the emission limitations, in addition to other operating limits as approved by the Administrator, the owner or operator must install and continuously operate a bag leak detection system. The owner or operator must keep records of periods when the alarm sounds and calculate whether these periods are more than 5 percent of the operating time for each 6-month period. The owner or operator must submit information documenting compliance with these requirements as part of an annual report; and report deviations semi-annually.

In addition, the Federal plan requires CISWI unit owners and operators to maintain for five years records of the initial performance tests and all subsequent performance tests, operating parameters, any maintenance, and operator training and qualification. The owner or operator must submit the results of the initial performance tests and all subsequent performance tests and values for the operating parameters in annual reports.

E. What Is the Compliance Schedule?

Each CISWI unit must either: (1) Reach final compliance by October 4, 2004; or (2) meet increments of progress and reach final compliance by October 3, 2005. In addition, the owner or operator must comply with the operator training and qualification requirements and inspection requirements by October 4, 2004, regardless of when the CISWI unit reaches final compliance.

Each owner or operator that takes more than 1 year to reach final compliance must submit a final control

plan (increment 1) by April 5, 2004 and reach final compliance (increment 2) by October 3, 2005. To ensure timely progress toward implementation, the Federal plan includes a requirement for owners or operators of CISWI units seeking to take an additional year to reach final compliance to submit a request to the Administrator that documents the need for an extension.

To meet the increment 1 requirement, the owner or operator of each CISWI unit must submit a final control plan that includes five items: (1) A description of the air pollution control devices and/or process changes that will be employed so that each CISWI unit complies with the emission limits and other requirements, (2) a list of the types of waste burned, (3) the maximum design waste burning capacity, (4) the anticipated maximum charge rate, and, (5) if applicable, the petition for site-specific operating limits. A final control plan is not required for units that will be shut down, but those units must close by October 4, 2004 or must submit a closure agreement by April 5, 2004, close no later than October 3, 2005, and meet other requirements as described in section VI A of this preamble.

To meet the second increment of progress, the owner or operator of each CISWI unit must incorporate all process changes or complete retrofit construction in accordance with the final control plan. The owner or operator must connect the air pollution control equipment or process changes such that when the CISWI unit is brought on line all necessary process changes or air pollution control equipment will operate as designed.

F. How Did EPA Determine the Compliance Schedule?

The EPA determined the compliance schedule based on the requirements of 40 CFR part 60, subpart B and the feasibility of owners or operators to retrofit combustion units with air pollution control devices. CISWI units must comply within 1 year after publication of the final Federal plan or meet increments of progress. The

requirement to reach final compliance within one year is consistent with 40 CFR 60.24(c) of subpart B. Subpart B requires final compliance to be "as expeditiously as practicable * * *" and requires increments of progress if the compliance schedule is longer than one year.

The EPA believes that many CISWI units can reach final compliance within 1 year after promulgation of the Federal plan based on their similarity to hospital medical and infectious waste incinerator (HMIWI) units. In addition, units could have used the time between the proposed rule and this promulgation of the final Federal plan to plan and begin retrofits.

The compliance schedule for CISWI units is similar to the compliance schedule for HMIWI units. Most CISWI units are similar in size to HMIWI units. In addition, CISWI units require similar controls to meet the CISWI Federal plan emission limits as HMIWI units would need to meet the HMIWI Federal plan emission limits. To determine the compliance schedule for HMIWI units, the EPA conducted case studies of eight HMIWI units that completed retrofits of the types of controls needed to meet the HMIWI Federal plan (64 FR 36430, July 6, 1999). Based on these case studies (Docket No. A-98-24, II-A-1), the EPA found that many HMIWI units can meet the requirements of the HMIWI Federal plan within 1 year. Similarly, many CISWI units could meet a 1-year schedule.

The EPA expects that some CISWI units could need more than 1 year to comply, as did some HMIWI units, due to site-specific circumstances. For units that cannot comply within 1 year, the Federal plan establishes increments of progress, as required by subpart B. The date for the first increment of progress, submittal of a final control plan, is April 5, 2004. The date for the second increment of progress, final compliance, is October 3, 2005. These increments are derived from the findings of the case studies performed to characterize the retrofit of control systems for HMIWI (Docket A-98-24, Item II-A-1). The size and design of CISWI are similar to the smaller HMIWI that were the subjects of the case studies. In particular, most units are small and controls will be ordered "off-the-shelf" as assembled packages. Thus, the EPA did not see a need for increments to address details of on-site construction and installation of control systems. Also, CISWI sites are not thought to have the problems with space and access that were concerns for HMIWI retrofits. In addition, CISWI units had the time between publication of the proposed rule and today's

publication of the final rule to begin developing the final control plan and to initiate retrofit activities.

The Federal plan does not include increments of progress for air curtain incinerators. Air curtain incinerators must comply with the requirements of the Federal plan one year after today's date. Delaying implementation for ACI would not be appropriate because there will be little or no need for the installation of control equipment on these units (primarily because control equipment is typically infeasible for ACI). Compliance with the opacity limits applicable to this class of units would primarily be achieved by good operation and maintenance practices. This approach is consistent with the requirement for completion of CISWI operator training by October 4, 2004.

VI. CISWI That Have or Will Shut Down

A. Units That Plan To Close Rather Than Comply

If you plan to permanently close your currently operating CISWI unit, you must do one of the following: (a) close by October 4, 2004, or (b) submit a legally binding closure agreement, including the date of closure, to the Administrator by April 5, 2004. The closure agreement must specify the date by which operation will cease. The closure date cannot be later than the final compliance date of the CISWI Federal plan (October 3, 2005). If you close your CISWI unit after October 4, 2004, but before October 3, 2005, then you must comply with the operator training and qualification requirements by October 4, 2004. In addition, while still in operation, your CISWI unit(s) is subject to the same requirement to apply for and obtain a title V operating permit that applies to a CISWI unit that will not be permanently closing.

B. Inoperable Units

In cases where a CISWI unit has already shut down, has been rendered inoperable, and does not intend to restart, the CISWI unit may be left off the source inventory in a State, Tribal, or this Federal plan. A CISWI unit that has been rendered inoperable would not be covered by the Federal plan. The CISWI owner or operator may do the following to render a CISWI unit inoperable: (1) Weld the waste charge door shut, (2) remove stack (and by-pass stack, if applicable), (3) remove combustion air blowers, or (4) remove burners or fuel supply appurtenances.

C. CISWI Units That Have Shut Down

CISWI units that are known to have already shut down (but are not known to be inoperable) must be included in the source inventory and identified in any State or Tribal plan submitted to the EPA.

1. Restarting Before the Final Compliance Date

If the owner or operator of an inactive CISWI unit plans to restart before the final compliance date, the owner or operator must submit a control plan for the CISWI unit and meet the applicable compliance schedule. Final compliance is required for all pollutants and all CISWI units no later than the final compliance date. (See section V E for the discussion on compliance schedules and increments of progress.)

2. Restarting After the Final Compliance Date

Under this Federal plan, a control plan would not be needed for inactive CISWI units that restart after the final compliance date. However, before restarting, operators of CISWI units would have to complete the operator training and qualification requirements and inspection requirements (if applicable) and complete retrofit or process modifications before restarting the unit. Performance testing to demonstrate compliance would be required within 90 days after restarting. There is no need to show that the increments of progress have been met since these steps would have occurred before restart while the CISWI unit was shut down and not generating emissions. A CISWI unit operating out of compliance after the final compliance date would be in violation of the Federal plan and subject to enforcement action.

VII. Implementation of the Federal Plan and Delegation

A. Background of Authority

Under sections 111(d) and 129(b) of the CAA, the EPA is required to adopt emission guidelines that are applicable to existing solid waste incineration sources. These emission guidelines are not enforceable until the EPA approves a State or Tribal plan or adopts a Federal plan that implements and enforces them, and the State, Tribal, or Federal plan has become effective. As discussed above, the Federal plan regulates CISWI units in a State or Tribal area that does not have an EPA-approved plan in effect.

Congress has determined that the primary responsibility for air pollution prevention and control rests with State

and local agencies. See section 101(a)(3) of the CAA. Consistent with that overall determination, Congress established sections 111 and 129 of the CAA with the intent that the States would assume primary responsibility for ensuring that the emission limitations and other requirements in the emission guidelines would be achieved. Also, in section 111(d) of the CAA, Congress explicitly required the EPA to establish procedures similar to those under section 110(c) for State implementation plans. Although Congress required the EPA to propose and promulgate a Federal plan for States that fail to submit approvable State plans on time, States and Tribes may submit approvable plans after today's promulgation of the CISWI Federal plan. The EPA strongly encourages States that are unable to submit approvable plans to request delegation of the Federal plan so that they can have primary responsibility for implementing the emission guidelines, consistent with Congress' intent.

Approved and effective State plans or delegation of the Federal plan is the EPA's preferred outcome since we believe that State agencies not only have the responsibility to carry out the emission guidelines, but also have the practical knowledge and enforcement resources critical to achieving the highest rate of compliance. For these reasons, the EPA will do all that it can to expedite delegation of the Federal plan to State agencies, whenever possible.

The EPA also believes that Indian Tribes should be the primary parties responsible for regulating air quality within Indian Country, if they desire to do so. See the EPA's Indian Policy ("Policy for Administration of Environmental Programs on Indian Reservations," signed by William D. Ruckelshaus, Administrator of EPA, dated November 4, 1984), reaffirmed in a 2001 memorandum ("EPA Indian Policy," signed by Christine Todd Whitman, Administrator of EPA, dated July 11, 2001).

B. Delegation of the Federal Plan and Retained Authorities

If a State or Indian Tribe intends to take delegation of the Federal plan, the State or Indian Tribe must submit to the appropriate EPA Regional Office a written request for delegation of authority. The State or Indian Tribe must explain how it meets the criteria for delegation. See generally "Good Practices Manual for Delegation of NSPS and NESHAP" (EPA, February 1983). In order to obtain delegation, an Indian Tribe must also establish its eligibility

to be treated in the same manner as a State (see section VII E.1 of this preamble). The letter requesting delegation of authority to implement the Federal plan must demonstrate that the State or Tribe has adequate resources, as well as the legal and enforcement authority to administer and enforce the program. A memorandum of agreement between the State or Tribe and the EPA would set forth the terms and conditions of the delegation, the effective date of the agreement, and would also serve as the mechanism to transfer authority. Upon signature of the agreement, the appropriate EPA Regional Office would publish an approval notice in the Federal Register, thereby incorporating the delegation authority into the appropriate subpart of 40 CFR part 62.

If authority is not delegated to a State or Indian Tribe, the EPA will implement the Federal plan. Also, if a State or Tribe fails to properly implement a delegated portion of the Federal plan, the EPA will assume direct implementation and enforcement of that portion. The EPA will continue to hold enforcement authority along with the State or Tribe even when a State or Tribe has received delegation of the Federal plan. In all cases where the Federal plan is delegated, the EPA will withhold and will not transfer to a State or Tribe authority to perform several specific actions. We typically do not delegate authority to devise alternative requirements that could change the stringency of the underlying standard, which are likely to be nationally significant, or which may require a national rulemaking and subsequent Federal Register notice. The following authorities may not be delegated to the State, Tribal or local agencies: Approval of alternative non-opacity emission standards, approval of alternative opacity standards, approval of major alternatives to test methods, approval of major alternatives to monitoring, and waiver of recordkeeping and reporting. For this Federal plan we are also maintaining the following authorities:

- (1) Alternative site-specific operating parameters established by facilities using CISWI controls other than a wet scrubber (§ 62.14640 of subpart III),
- (2) Petitions to the Administrator under section 62.14530 to add a chemical recovery unit to section 62.14525(n) of subpart III, and
- (3) Alternative methods of demonstrating compliance.

CISWI owners or operators who wish to establish alternative operating parameters or alternative methods of demonstrating compliance should submit a request to the Regional Office

Administrator with a copy to the appropriate State or Tribe.

C. Mechanisms for Transferring Authority

There are two mechanisms for transferring implementation authority to State or Tribal agencies: (1) EPA approval of a State or Tribal plan after the Federal plan is in effect; and (2) if a State or Tribe does not submit or obtain approval of its own plan, EPA delegation to a State or Tribe of the authority to implement certain portions of this Federal plan to the extent appropriate and if allowed by State or Tribal law. Both of these options are described in more detail below.

1. Federal Plan Becomes Effective Prior to Approval of a State or Tribal Plan

After CISWI units in a State or Tribal area become subject to the Federal plan, the State or Tribal agency may still adopt and submit a plan to the EPA. If the EPA determines that the State or Tribal plan is as protective as the emission guidelines, we will approve the State or Tribal plan. If the EPA determines that the plan is not as protective as the emission guidelines, we will disapprove the plan and the CISWI units covered in the State or Tribal plan will remain subject to the Federal plan until a State or Tribal plan covering those CISWI units is approved and effective.

Upon the effective date of an approved State or Tribal plan, the Federal plan will no longer apply to CISWI units covered by such a plan, and the State or Tribal agency will implement and enforce the State or Tribal plan in lieu of the Federal plan. When an EPA Regional Office approves a State or Tribal plan, it will amend the appropriate subpart of 40 CFR part 62 to indicate such approval.

2. State or Tribe Takes Delegation of the Federal Plan

The EPA, in its discretion, may delegate to State or eligible Tribal agencies the authority to implement this Federal plan. As discussed above, we believe that it is advantageous and the best use of resources for State or Tribal agencies to agree to undertake, on the EPA's behalf, the administrative and substantive roles in implementing the Federal plan to the extent appropriate and where authorized by State or Tribal law. If a State requests delegation, we will generally delegate the entire Federal plan to the State agency. These functions include administration and oversight of compliance reporting and recordkeeping requirements, CISWI

inspections, and preparation of draft notices of violation.

The EPA also believes that it is the best use of resources for Tribal agencies to undertake a role in the implementation of the Federal plan. The Tribal Authority Rule issued on February 12, 1998 (63 FR 7254) provides Tribes the opportunity to develop and implement Clean Air Act programs. However, due to resource constraints and other factors unique to Tribal governments, it leaves to the discretion of the Tribe whether to develop these programs and which elements of the program they will adopt. Consistent with the approach of the Tribal Authority Rule, we may choose to delegate a partial Federal plan (*i.e.*, to delegate authority for some functions needed to carry out the plan) in appropriate circumstances and where consistent with Tribal law.

Both States and Tribal agencies, that have taken delegation, as well as the EPA, will have responsibility for bringing enforcement actions against sources violating Federal plan provisions. However, the EPA recognizes that Tribes have limited criminal enforcement authority, and will address in the delegation agreement with the Tribe how criminal enforcement issues are referred to the EPA.

D Implementing Authority

The EPA will delegate authority within the EPA to the EPA Regional Administrators to implement the CISWI Federal plan. All reports required by this Federal plan should be submitted to the appropriate Regional Office Administrator. Table 1 under SUPPLEMENTARY INFORMATION lists the contact information for the EPA Regional Offices and the States that they cover.

E. CISWI Federal Plan and Indian Country

The term "Indian country," as used in this preamble, means (1) all land within the limits of any Indian reservation under the jurisdiction of the United States government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation; (2) all dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a State; and (3) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.

The CISWI Federal plan will apply throughout Indian country to ensure that there is not a regulatory gap for existing CISWI units in Indian Country. However, eligible Indian Tribes now have the authority under the CAA to develop Tribal plans in the same manner that States develop State plans. On February 12, 1998, EPA promulgated regulations that outline provisions of the CAA for which it is appropriate to treat Tribes in the same manner as States. See 63 FR 7254 (Final Rule for Indian Tribes: Air Quality Planning and Management, (Tribal Authority Rule)) (codified at 40 CFR part 49). As of March 16, 1998, the effective date of the Tribal Authority Rule, the EPA has had authority under the CAA to approve Tribal programs such as Tribal plans to implement and enforce the CISWI emission guidelines.

1 Tribal Implementation

Section 301(d) of the CAA authorizes the Administrator to treat an Indian tribe as a State under certain circumstances. The Tribal Authority Rule, which implements section 301(d) of the CAA, identifies provisions of the CAA for which it is appropriate to treat a Tribe as a State. (See 40 CFR 49.3 and 49.4.) Under the Tribal Authority Rule, a Tribe may be treated as a State for purposes of this Federal plan. If a Tribe meets the criteria below, the EPA can delegate to an Indian tribe authority to implement the Federal plan in the same way it can delegate authority to a State:

- (1) The applicant is an Indian tribe recognized by the Secretary of the Interior;
- (2) The Indian tribe has a governing body carrying out substantial governmental duties and functions;
- (3) The functions to be exercised by the Indian tribe pertain to the management and protection of air resources within the exterior boundaries of the reservation or other areas within the tribe's jurisdiction; and
- (4) The Indian tribe is reasonably expected to be capable, in the EPA Regional Administrator's judgment, of carrying out the functions to be exercised in a manner consistent with the terms and purposes of the CAA and all applicable regulations. (See 40 CFR 49.6.)

2 EPA Implementation

The CAA also provides the EPA with the authority to administer Federal programs in Indian Country. This authority is based in part on the general purpose of the CAA, which is national in scope. Section 301(a) of the CAA provides the EPA broad authority to issue regulations that are necessary to

carry out the functions of the CAA. Congress intended for the EPA to have the authority to operate a Federal program when Tribes choose not to develop a program, do not adopt an approvable program, or fail to adequately implement an air program authorized under section 301(d) of the CAA.

Section 301(d)(4) of the CAA authorizes the Administrator to directly administer provisions of the CAA to achieve the appropriate purpose where Tribal implementation is not appropriate or administratively not feasible. The EPA's interpretation of its authority to directly implement CAA programs in Indian country is discussed in more detail in the Tribal Authority Rule. See 63 FR 7262-7263. As mentioned previously, Tribes may, but are not required to, submit a CISWI plan under section 111(d) of the CAA.

3 Applicability in Indian Country

The Federal plan applies throughout Indian Country except where an EPA-approved plan already covers an area of Indian country. This approach is consistent with the EPA's implementation of the Federal Operating Permits program in Indian Country (see 64 FR 8247 (February 19, 1999)).

VIII. Title V Operating Permits

Except for the sources specified in section 62.14830 of the Federal plan, sources subject to this CISWI Federal plan must obtain title V operating permits. These title V operating permits must assure compliance with all applicable requirements for these sources, including all applicable requirements of this Federal plan. See 40 CFR 70.6(a)(1), 70.2, 71.6(a)(1) and 71.2.

Owners or operators of section 129 sources (including CISWI units) subject to standards or regulations under sections 111 and 129 must operate pursuant to a title V permit not later than 36 months after promulgation of emission guidelines under sections 111 and 129 or by the effective date of the State, Tribal, or Federal title V operating permits program that covers the area in which the unit is located, whichever is later. The EPA has interpreted section 129(e) to be consistent with section 503(d) of the CAA and 40 CFR 70.7(b) and 71.7(b). (See, *e.g.*, the final Federal Plan for Hospital/Medical/Infectious Waste Incinerators, August 15, 2000 (65 FR 49868, 49878)). Section 503(d) of the CAA and 40 CFR 70.7(b) and 71.7(b) allow a source to operate without being in violation of title V once the source has submitted a timely and complete

permit application, even if the source has not yet received a final title V operating permit from the permitting authority.² As a result, the EPA interprets the dates in section 129(e) to be the dates by which complete title V applications need to be submitted. In the absence of such an interpretation, a section 129 source may be required to prepare and submit a complete title V application and the permitting authority would have to issue a permit to this source in a very short period of time.³

As a result of the EPA's interpretation, existing CISWI units must submit complete title V applications by the later of the following dates: Not later than 36 months after the promulgation of 40 CFR part 60, subpart DDDD or by the effective date of the State, Tribal, or Federal title V operating permits program that covers the area in which the unit is located. As of today's action, all areas of the country are covered by effective title V programs. As a result, the relevant section 129(e) date for existing CISWI units is 36 months following promulgation of 40 CFR part 60, subpart DDDD, *i.e.*, December 1, 2003. Therefore, December 1, 2003, is the latest possible date by which complete applications for existing CISWI units can be submitted and still be considered timely. This date applies regardless of when the CISWI Federal plan becomes effective or when an EPA approved section 111(d)/129 plan for existing CISWI units becomes effective. If, however, an earlier application deadline applies to an existing CISWI unit, then this deadline must be met in order for the unit to be in compliance

² A title V application should be submitted early enough for the permitting authority to find the application either complete or incomplete before the title V application deadline. In the event the application is found incomplete by the permitting authority, the source must submit the information needed to make the application complete by the application deadline in order to obtain the application shield. See 40 CFR 62.14835(b) and 40 CFR 70.5(a)(2) and 71.5(a)(2).

³ For example, in the absence of such an interpretation, if a final Federal plan were to become effective more than 24 months after the promulgation of emission guidelines promulgated under sections 111 and 129, a source, if subject to the Federal plan, would have less than 12 months to prepare and submit a complete title V permit application and to have the permit issued. The EPA's interpretation allows section 129(e) to be read consistently with section 503(d) of the CAA and 40 CFR 70.7(b) and 71.7(b). The EPA's interpretation is also consistent with section 503(c) of the CAA which requires sources to submit title V applications not later than 12 months after becoming subject to a title V permits program. If a permit, as opposed to a title V application, were required by the later of the two deadlines specified in section 129(e), some section 129 sources would be required to have been issued final title V permits in potentially much less time than allotted for non-section 129 sources to submit their title V applications.

with section 502(a) of the CAA. To determine when an application is due for an existing CISWI unit, section 129(e) of the CAA must be read in conjunction with section 503(c) of the CAA.

As stated in section 503(c), a source has up to 12 months to apply for a title V permit once it becomes subject to a title V permitting program.⁴ For example, if an existing CISWI unit becomes subject to a title V permitting program for the first time on the effective date of this Federal plan, then the source must apply for a title V permit within 12 months of the effective date of this Federal plan in order to operate after this date in compliance with Federal law.

An application deadline earlier than either of the two dates noted above, *i.e.*, December 1, 2003, or not later than 12 months after the effective date of this Federal plan, may apply to an existing CISWI unit if it is subject to title V for more than one reason. For example, an existing CISWI unit may already be subject to title V as a result of being a major source under one or more of three major source definitions in title V—section 112, section 302, or part D of title I of the CAA. See 40 CFR 70.3(a)(1) and 71.3(a)(1) (subjecting major sources to title V permitting) and 40 CFR 70.2 and 71.2 (defining major source for purposes of title V). See also 40 CFR 70.3(a) and (b) and 71.3(a) and (b) for a list of the applicability criteria which trigger the requirement to apply for a title V permit.

If an owner or operator is already subject to title V by virtue of some requirement other than this Federal plan and has submitted a timely and complete permit application, but the draft title V permit has not yet been released by the permitting authority, then the owner or operator must supplement the title V application by including the applicable requirements of this Federal plan in accordance with 40 CFR 70.5(b) or 71.5(b). If an existing CISWI unit is a major source or is part of a major source, is subject to this Federal plan, and is already covered by a title V permit with a remaining permit term of three or more years on the effective date of this Federal plan, then the owner or operator will receive from his permitting authority a notice of intent to reopen his source's title V

⁴ If a source is subject to title V for more than one reason, the 12-month time frame for submitting a title V application is triggered by the requirement which first causes the source to become subject to title V. As provided in section 503(c) of the CAA permitting authorities may establish permit application deadlines earlier than the 12-month deadline.

permit to include the requirements of this Federal plan. Reopenings required for such CISWI units must be completed not later than 18 months after the effective date of this Federal plan in accordance with the procedures established in 40 CFR 70.7(f)(1)(i) or 71.7(f)(1)(i). If an existing CISWI unit subject to this Federal plan does not meet the above criteria, *e.g.*, the unit is part of a nonmajor source or is covered by a permit which has a remaining term of less than 3 years on the effective date of this Federal plan, then the permitting authority does not need to reopen the source's permit, as a matter of Federal law, to include the requirements of this Federal plan.⁵ However, the owner or operator of a source subject to a section 111/129 Federal plan remains subject to, and must act in compliance with, section 111/129 requirements and all other applicable requirements to which the source is subject regardless of whether these requirements are included in a title V permit. See 40 CFR 70.6(a)(1), 70.2, 71.6(a)(1) and 71.2.

The EPA has recently become aware that there has been some confusion regarding the title V obligations of section 129 sources that are subject to standards or regulations under sections 111 and 129. We are therefore including Table 6 to help clarify when CISWI units (even those not subject to this Federal plan) must apply for a title V permit. While Table 6 provides specific information relative to CISWI units, the same title V obligations apply to all section 129 sources subject to standards or regulations under sections 111 and 129. Of course, specific deadlines will vary for other section 129 sources depending on when the relevant NSPS is promulgated, when the relevant State or Tribal section 111(d)/129 plan is approved by the EPA and becomes effective, etc. Lastly, Table 6 takes into account that as of the promulgation date, *i.e.*, December 1, 2000, for the NSPS (subpart CCCC of part 60) and emission guidelines (subpart DDDD of part 60) for CISWI units, every area of the country was covered by a title V permits program under 40 CFR part 70 or part 71. This point is relevant because a section 111/129 standard cannot trigger the requirement for a source to apply for a title V permit unless a title V permits program is in

⁵ See The CAA section 502(b)(9); 40 CFR 70.7(f)(1)(i) and 71.7(f)(1)(i). Owners or operators of CISWI units, which have been permitted and are subject to this Federal plan, may wish to consult their operating permits program regulations or permitting authorities to determine whether their permits must be reopened to incorporate the requirements of this Federal plan.

effect in the area in which the source is located.

TABLE 6.—DEADLINES FOR TITLE V SOURCES

Submitting Title V Permit Applications	
If a CISWI unit is a major source or is part of a major source, and had commenced operation as of the effective date of the relevant title V permits program.	Then a complete title V application which covers the entire source ⁶ is due not later than 12 months (or earlier if required by the title V permitting authority) after the effective date of the relevant title V permits source, and had program. See CAA section 503(c) and 40 CFR 70.4(b)(11)(i), 71.4(i)(1), 70.5(a)(1)(i) and 71.5(a)(1)(i).
If a CISWI unit is a major source or is part of a major source but did not commence operation until after the relevant title V permits program became effective.	Then a complete title V application which covers the entire source is due not later than 12 months (or earlier if required by the title V permitting authority) after the date the source commences operation. See CAA section 503(c) and 40 CFR 70.5(a)(1)(i) and 71.5(a)(1)(i).
If a CISWI unit is a nonmajor source or is part of a nonmajor source, is subject to the CISWI NSPS (subpart CCCC of 40 CFR part 60), and had commenced operation as of December 1, 2000.	Then a complete title V application ⁷ is due not later than 12 months after subpart CCCC was promulgated, i.e., December 1, 2001 (or earlier if required by the title V permitting authority). See CAA section 503(c) and 40 CFR 70.5(a)(1)(i) and 71.5(a)(1)(i).
If a CISWI unit is a nonmajor source or is part of a nonmajor source, is subject to the CISWI NSPS (subpart CCCC of 40 CFR part 60) but did not commence operation until after December 1, 2000.	Then a complete title V application is due not later than 12 months (or earlier if required by the title V permitting authority) after the date the source commences operation. See CAA section 503(c) and 40 CFR 70.5(a)(1)(i) and 71.5(a)(1)(i).
If a CISWI unit is a nonmajor source or is part of a nonmajor source, and is subject to an EPA approved and effective State or Tribal section 111(d)/129 plan.	Then a complete title V application is due not later than 12 months (or earlier if required by the title V permitting authority) after the effective date of the EPA approved State or Tribal section 111(d)/129 plan. ⁸ See CAA section 503(c) and 40 CFR 70.5(a)(1)(i) and 71.5(a)(1)(i). In no event, however, can such an existing CISWI unit submit a complete title V application after December 1, 2003, and have it be considered timely. See CAA section 129(e) and 40 CFR 62.14835 of subpart III.
If a CISWI unit is a nonmajor source or is part of a nonmajor source, and is subject to the CISWI Federal plan (subpart III of 40 CFR part 62).	Then a complete title V application is due not later than 12 months (or earlier if required by the title V permitting authority) after the effective date of 40 CFR part 62, subpart III. See CAA section 503(c) and 40 CFR 70.5(a)(1)(i) and 71.5(a)(1)(i). In no event, however, can such an existing CISWI unit submit a complete title V application after December 1, 2003 and have it be considered timely. See CAA section 129(e) and 40 CFR 62.14835 of subpart III.
If a CISWI unit is required to obtain a title V permit due to triggering more than one of the applicability criteria listed above or in 40 CFR 70.3(a) or 71.3(a).	
Then a complete title V application is due not later than 12 months (or earlier if required by the title V permitting authority) after the unit triggers the criterion which first causes the unit to be subject to title V. See CAA section 503(c) and 40 CFR 70.3(a) and (b), 70.5(a)(1), 71.3(a) and (b) and 71.5(a)(1). In no event, however, can an existing CISWI unit submit a complete title V application after December 1, 2003 and have it be considered timely. See CAA section 129(e) and 40 CFR 62.14835 of subpart III.	
Reopening Title V Permits	
If a CISWI unit is a major source or is part of a major source, is subject to the CISWI NSPS (subpart CCCC of 40 CFR part 60), and is covered by a title V permit with a remaining permit term of 3 or more years on December 1, 2000.	Then the title V permitting authority must complete a reopening of the source's title V permit to incorporate the requirements of 40 CFR part 60, subpart CCCC not later than June 1, 2002. See CAA section 502(b)(9); 40 CFR 70.7(f)(1)(i) and 71.7(f)(1)(i).
If a CISWI unit is a major source or is part of a major source, is subject to an EPA approved and effective State or Tribal section 111(d)/129 plan for CISWI units, and is covered by a title V permit with a remaining permit term of 3 or more years on the effective date of the EPA approved section 111(d)/129 plan.	Then the title V permitting authority must complete a reopening of the source's title V permit to incorporate the requirements of this EPA approved and effective section 111(d)/129 plan not later than 18 months after the effective date of this plan. See CAA section 502(b)(9); 40 CFR 70.7(f)(1)(i) and 71.7(f)(1)(i).

⁶ A title V application from a major source must address all emissions units at the title V source, not just the section 129 emissions unit. See 40 CFR 70.3(c)(1) and 71.3(c)(1). (For information on aggregating emissions units to determine what is a source under title V, see the definition of major source in 40 CFR 70.2, 71.2, and 63.2.)

⁷ Consistent with 40 CFR 70.3(c)(2) and 71.3(c)(2), a permit application from a nonmajor title V source

is only required to address the emissions units which caused the source to be subject to title V. The applicability criteria which determine the need for the owner or operator of a nonmajor source to apply for a title V permit are found in 40 CFR 70.3(a) and (b) and 71.3(a) and (b). Permits issued to these nonmajor sources must include all of the applicable requirements that apply to the triggering units, e.g., State Implementation Plan requirements, section 111 or 112 requirements etc. See footnote #2 in

Change to Definition of Major Source rule, November 27, 2001 (66 FR 59161, 59163).

⁸ If a CISWI unit becomes subject to an approved and effective State or Tribal section 111(d)/129 plan after being subject to an effective Federal plan, the CISWI unit is still required to file a complete title V application consistent with the application deadlines for units subject to the CISWI Federal plan.

TABLE 6.—DEADLINES FOR TITLE V SOURCES—Continued

If a CISWI unit is a major source or is part of a major source, is subject to the CISWI Federal plan (subpart III of 40 CFR part 62), and is covered by a title V permit with a remaining permit term of 3 or more years on the effective date of this Federal plan.	Then the title V permitting authority must complete a reopening of the source's title V permit to incorporate the requirements of subpart III of 40 CFR part 62 not later than 18 months after the effective date of the CISWI Federal plan. See CAA section 502(b)(9); 40 CFR 70.7(f)(1)(i) and 71.7(f)(1)(i).
Updating Existing Title V Permit Applications	
If a CISWI unit is subject to the CISWI NSPS (subpart CCCC of 40 CFR part 60), but first became subject to title V permitting prior to the promulgation of the NSPS, and the owner or operator of the unit has submitted a timely and complete title V permit application, but the draft title V permit has not yet been released by the permitting authority.	Then the owner or operator must supplement the title V application by including the applicable requirements of 40 CFR part 60, subpart CCCC in accordance with 40 CFR 70.5(b) or 71.5(b).
If a CISWI unit is subject to an EPA approved and effective State or Tribal section 111(d)/129 plan for CISWI units, but first became subject to title V permitting prior to the effective date of the section 111(d)/129 plan, and the owner or operator of the unit has submitted a timely and complete title V permit application, but the draft title V permit has not yet been released by the permitting authority.	Then the owner or operator must supplement the title V application by including the applicable requirements of the approved and effective section 111(d)/129 plan in accordance with 40 CFR 70.5(b) or 71.5(b).
If a CISWI unit is subject to the CISWI Federal plan (subpart III of 40 CFR part 62), but first became subject to title V permitting prior to the effective date of this Federal plan, and the owner or operator of the unit has submitted a timely and complete title V permit application, but the draft title V permit has not yet been released by the permitting authority.	Then the owner or operator must supplement the title V application by including the applicable requirements of 40 CFR part 62, subpart III in accordance with 40 CFR 70.5(b) or 71.5(b).

Title V and Delegation of a Federal Plan

For the sake of brevity, the discussion from the proposed Federal plan regarding title V and delegation of a Federal plan is not being repeated. See "Title V and Delegation of a Federal Plan" section of the proposed Federal plan for CISWI, November 25, 2002 (67 FR 70640; 70652). Nevertheless, the preamble language from this section in the proposed rule is hereby reaffirmed in this final rule.

IX. Statutory and Executive Order Reviews

This section addresses the following statutory and executive order administrative requirements: Executive Orders 12866, 13132, 13175, 13045 and 13211; Paperwork Reduction Act; Regulatory Flexibility Act/Small Business Regulatory Enforcement Fairness Act; Unfunded Mandates Reform Act; National Technology Transfer and Advancement Act; and the Congressional Review Act. Since today's action implements the CISWI emission guidelines (40 CFR part 60, subpart DDDD) as promulgated on December 1, 2000, and does not impose any new requirements, much of the following discussion refers to the documentation of applicable requirements as discussed in the preamble to the rule promulgating the emission guidelines (65 FR 75338, December 1, 2000).

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866, 58 FR 57135 (October 4, 1993), the EPA must

determine whether the regulatory action is "significant" and, therefore, subject to OMB review and the requirements of the Executive Order. The order defines "significant regulatory action" as one that is likely to result in a rule that may:

- (1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;
- (2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- (3) Materially alter the budgetary impacts of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- (4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

The EPA considered the 2000 emission guidelines to be significant and the rules were reviewed by OMB in 2000. See 65 FR 75338, December 1, 2000. The Federal plan promulgated today would simply implement the 2000 emission guidelines and does not result in any additional control requirements or impose any additional costs above those previously considered during promulgation of the 2000 emission guidelines. Therefore, this regulatory action is considered "not significant" under Executive Order 12866.

B. Paperwork Reduction Act

The Office of Management and Budget (OMB) has approved the information collection requirements contained in this rule under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* and has assigned OMB control number 2060-0451. (ICR 1927.02)

This ICR reflects the burden estimate for the emission guidelines which were promulgated in the Federal Register on December 1, 2000. The burden estimate includes the burden associated with State or Tribal plans as well as the burden associated with the Federal plan. Consequently, the burden estimates described below overstate the information collection burden associated with the Federal plan. However, upon approval by the EPA, a State or Tribal plan becomes federally enforceable. Therefore, it is important to estimate the full burden associated with the State or Tribal plans and the Federal plan. As State or Tribal plans are approved, the Federal plan burden will decrease, but the overall burden of the State or Tribal plans and the Federal plan will remain the same.

The Federal plan contains monitoring, reporting, and recordkeeping requirements. The information will be used to ensure that the Federal plan requirements are met on a continuous basis. Records and reports will be necessary to enable us to identify waste incineration units that may not be in compliance with the Federal plan requirements. Based on reported information, the EPA would decide

which units and what records or processes should be inspected. The records that owners and operators of existing CISWI units maintain will indicate to us whether personnel are operating and maintaining control equipment property

These recordkeeping and reporting requirements are specifically authorized by section 114 of the CAA (42 U.S.C. 7414). All information submitted to the EPA for which a claim of confidentiality is made will be safeguarded according to EPA policies in 40 CFR part 2,

subpart B, Confidentiality of Business Information

The estimated average annual burden for the first 3 years after promulgation of the emission guidelines for industry and the implementing agency is outlined below

Affected entity	Total hours	Labor costs	Capital costs	O&M costs	Total costs
Industry	9,145	\$407,067	0	0	\$407,067
Implementing agency	1,817	48,386	0	0	48,386

The EPA expects the Federal plan to affect a maximum of 116 units over the first three years. (Note: This assumes that no State plans are in effect.) The EPA assumes that 6 existing units will be replaced by 6 new units each year. There are no capital, start-up, or operation and maintenance costs for existing units during the first three years. The implementing agency would not incur any capital or start-up costs. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, disclose, or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control number for this final rule and for the emissions guidelines is 2060-0451. The OMB control numbers for EPA regulations are listed in 40 CFR part 9. In addition, EPA is amending the table in 40 CFR part 9 of currently approved OMB control numbers for information requirements contained in this final rule.

C. Regulatory Flexibility Act (RFA)/ Small Business Regulatory Enforcement Fairness Act (SBREFA)

The RFA generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency

certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions. For purposes of assessing the impacts of today's rule on small entities, small entity is defined as: (1) A small business that has less than 500 employees; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise that is independently owned and operated and is not dominant in its field. The SBA guidelines define a small business based on number of employees or annual revenues and the size standards vary from industry to industry. Generally, businesses covered by the North American Industrial Classification System (NAICS) codes affected by this rule are considered small if they have less than 500 employees or less than \$5 million in annual sales.

During the 2000 CISWI emission guidelines rulemaking, the EPA determined that based on the low number of affected small entities in each individual market, the alternative method of waste disposal available, and the relatively low control cost, the CISWI emission guidelines should not generate a significant small business impact on a substantial number of small entities in the commercial and industrial sectors. The EPA determined that it was not necessary to prepare a regulatory flexibility analysis in connection with the final emission guidelines. The EPA has also determined that the final emission guidelines would not have a significant economic impact on a substantial number of small entities (65 FR 75348). This Federal plan does not establish any new requirements. Therefore, pursuant to the provisions of 5 U.S.C. 605(b), the EPA has determined that this Federal plan will not have a significant impact on a substantial number of small

entities, and thus a regulatory flexibility analysis is not required.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, the EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any 1 year.

Before promulgating a rule for which a written statement is needed, section 205 of the UMRA generally requires us to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows us to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation of why that alternative was not adopted.

Before establishing any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, the EPA must develop under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, thereby enabling officials of affected small governments to have meaningful and timely input in the development of the regulatory proposal with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

The EPA has determined that this rule does not contain a Federal mandate that may result in expenditures of \$100

million of more for State, local, and tribal governments, in the aggregate, or the private sector in any 1 year. The environmental impact analysis for the emission guidelines estimates the total national annualized cost impact of this regulatory action at \$11.6 million per year (Docket A-94-63). This Federal plan will apply to only a subset of the units considered in the environmental impacts analysis for the emission guidelines. Thus, this rule is not subject to the requirements of sections 202 and 205 of the UMRA. Additionally, the EPA has determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments, because commercial and industrial units are not likely to be owned by small governments.

B. Executive Order 13132: Federalism

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires the EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" are defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

This final rule does not have Federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This rule establishes emission limits and other requirements for solid waste incineration units that are not covered by an EPA-approved and effective State or Tribal plan. The EPA is required by section 129 of the CAA, 42 U.S.C. 7429, to establish the standards for such units. This regulation primarily affects private industry and does not impose significant economic costs on State or local governments. The standards established by this rule apply to facilities that operate commercial or industrial solid waste incineration units located in States that do not have EPA-approved plans covering such units by the effective date of the Federal plan (and the owners or operators of such facilities). The regulation does not include an express provision preempting State or local regulations. However, once this Federal plan is in

effect, covered facilities would be subject to the standards established by this rule, regardless of any less protective State or local regulations that contain emission limitations for the pollutants addressed by this rule. To the extent that this might preempt State or local regulations, it does not significantly affect the relationship between the national government and the States, or the distribution of power and responsibilities among the various levels of government. Thus, the requirements of section 6 of the Executive Order do not apply to this rule; and the EPA has complied with the requirements of section 4(e), to the extent that they may be applicable to the regulations, by providing notice to potentially affected State and local officials through publication of this rule.

Although section 6 of Executive Order 13132 does not apply to this rule, the EPA consulted with representatives of State and local governments to enable them to provide meaningful and timely input into the development of the CISWI emission guidelines. This consultation took place during the Industrial Combustion Coordinated Rulemaking Federal Advisory Committee Act committee meetings, where members representing State and local governments participated in developing recommendations for our combustion-related rulemakings, including the CISWI emission guidelines. Additionally, the EPA sponsored the Small Communities Outreach Project, which involved meetings with elected officials and other government representative to provide them with information about the CISWI emission guidelines and to solicit their comments. The concerns raised by representatives of State and local governments were considered during the development of the CISWI emission guidelines.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

Executive Order 13175, entitled "Consultation and Coordination with Indian Tribal Governments" (65 FR 67249, November 6, 2000), requires the EPA to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications." "Policies that have tribal implications" is defined in the Executive Order to include regulations that have "substantial direct effects on one or more Indian Tribes, on the relationship between the Federal Government and the Indian Tribes, or on the distribution of power and

responsibilities between the Federal government and Indian Tribes."

This Federal plan does not have tribal implications. It will not have substantial direct effects on tribal governments, on the relationship between the Federal Government and Indian Tribes, or on the distribution of power and responsibilities between the Federal Government and Indian Tribes, as specified in Executive Order 13175.

The EPA knows of no CISWI units presently owned by Indian tribal governments. However, if any exist now or in the future, the rule would not have tribal implications on these tribal governments as defined by the Executive Order. This Federal plan simply implements the emission guidelines. It does not result in any additional control requirements nor imposes any additional costs above those previously considered during promulgation of the emission guidelines. Thus, the requirements of Executive Order 13175 do not apply.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045 (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be "economically significant" as defined under Executive Order 12866, (2) concerns an environmental health or safety risk that the EPA has reason to believe may disproportionately affect children. If the regulatory action meets these criteria, the EPA must evaluate the environmental health or safety effects of the planned rule on children and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives the EPA considered.

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5-501 of the Order has the potential to influence the regulation. This Federal plan is not subject to Executive Order 13045 because it is based on technology performance and not on health or safety risks. Additionally, this Federal plan is not economically significant as defined by Executive Order 12866.

H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use

This rule is not subject to Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" (66 FR 28355 (May 22, 2001)) because it is

not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) of 1995 (Pub. L. No. 104-113; 15 U.S.C. 272) directs the EPA to use voluntary consensus standards in regulatory and procurement activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus bodies. The NTTAA directs the EPA to provide Congress, through annual reports to the Office of Management and Budget (OMB), with explanations when an agency does not use available and applicable voluntary consensus standards.

This Federal plan involves technical standards. The EPA includes in this plan EPA Methods 1, 3A, 3B, 5, 6, 6C, 7, 7A, 7C, 7D, 7E, 9, 10, 10A, 10B, 23, 26A, and 29. Consistent with the NTTAA, the EPA conducted searches to identify voluntary consensus standards in addition to these EPA methods. No applicable voluntary consensus standards were identified for EPA Methods 7A, 7D, 9, and 10B. The search and review results have been documented and are placed in the Docket No. A-2000-52 for this Federal plan.

This search for emission measurement procedures identified 24 voluntary consensus standards. The EPA determined that 20 of these 24 standards were impractical alternatives to EPA test methods for the purposes of this Federal plan. Therefore, the EPA is not adopting these standards today. The reasons for this determination for the 20 methods are discussed below.

The standard, ASTM D3162 (1994) "Standard Test Method for Carbon Monoxide in the Atmosphere (Continuous Measurement by Nondispersive Infrared Spectrometry)," is impractical as an alternative to EPA Method 10 in the Federal plan because this ASTM standard, which is stated to be applicable in the range of 0.5-100 ppm CO, does not cover the potential range in the plan (up to 157 ppm). Whereas EPA Method 10 has a range from 20-1000 ppm CO. Also, ASTM D3162 does not provide a procedure to remove carbon dioxide interference. Therefore, this ASTM standard is not appropriate for combustion source conditions. In terms of NDIR instrument

performance specifications, ASIM D3162 has much higher maximum allowable rise and fall times (5 minutes) than EPA Method 10 (which has 30 seconds). However, it should be noted that ASIM D3162 has more quality control requirements than EPA Method 10 in terms of instrument calibration procedures, span gas cylinder validation procedures, and operational checks.

The standard ASTM E1979-98 (1998), "Standard Practice for Ultrasonic Extraction of Paint, Dust, Soil, and Air Samples for Subsequent Determination of Lead," is impractical as an alternative to EPA Method 29 in this Federal plan. This ASTM standard does not require the use of hydrogen fluoride (HF) as in EPA Method 29 and, therefore, it cannot be used for the preparation, digestion, and analysis of Method 29 samples. Additionally, Method 29 requires the use of a glass fiber filter, whereas this ASTM standard requires cellulose filters and other probable nonglass fiber media, which cannot be considered equivalent to EPA Method 29.

The European standard EN 1911-1,2,3 (1998), "Stationary Source Emissions—Manual Method of Determination of HCl—Part 1: Sampling of Gases Ratified European Text—Part 2: Gaseous Compounds Absorption Ratified European Text—Part 3: Adsorption Solutions Analysis and Calculation Ratified European Text," is impractical as an alternative to EPA Method 26A. Part 3 of this standard cannot be considered equivalent to EPA Method 26A because the sample absorbing solution (water) would be expected to capture both HCl and chlorine gas, if present, without the ability to distinguish between the two. The EPA Method 26A uses an acidified absorbing solution to first separate HCl and chlorine gas so that they can be selectively absorbed, analyzed, and reported separately. In addition, in EN 1911 the absorption efficiency for chlorine gas would be expected to vary as the pH of the water changed during sampling.

The following ten methods are impractical alternatives to EPA test methods for the purposes of this plan because they are too general, too broad, or not sufficiently detailed to assure compliance with EPA regulatory requirements: ASTM D3154-91 (1995), "Standard Method for Average Velocity in a Duct (Pitot Tube Method)," for EPA Methods 1 and 3B; ASTM D5835-95, "Standard Practice for Sampling Stationary Source Emissions, for Automated Determination of Gas Concentration," for EPA Method 3A; ISO 10396:1993, "Stationary Source Emissions: Sampling for the Automated

Determination of Gas Concentrations," for EPA Method 3A; CAN/CSA Z223 2-M86(1986), "Method for the Continuous Measurement of Oxygen, Carbon Dioxide, Carbon Monoxide, Sulphur Dioxide, and Oxides of Nitrogen in Enclosed Combustion Flue Gas Streams," for EPA Method 3A; ASME C00031 or PTC 19-10-1981—Part 10, "Flue and Exhaust Gas Analyses," for EPA Methods 6 and 7; ASTM D1608-98, "Test Method for Oxides of Nitrogen in Gaseous Combustion Products (Phenyl Disulfonic Acid Procedures)," for EPA Method 7; ISO 7934:1998, "Stationary Source Emissions—Determination of the Mass Concentration of Sulfur Dioxide—Hydrogen Peroxide/Barium Perchlorate/Thorin Method," for EPA Method 6; ISO 11564:1998, "Stationary Source Emissions—Determination of the Mass Concentration of Nitrogen Oxides—NEDA (naphthylethylenediamine)/Photometric Method," for EPA Methods 7 and 7C; CAN/CSA Z223 21-M1978, "Method for the Measurement of Carbon Monoxide: 3—Method of Analysis by Non-Dispersive Infrared Spectrometry," for EPA Methods 10 and 10A; and European Committee for Standardization (CEN) EN 1948-3 (1997), "Determination of the Mass Concentration of PCDD'S/PCDF'S—Part 3: Identification and Quantification," for EPA Method 23.

The following seven methods are impractical alternatives to EPA test methods for the purposes of this Federal plan because they lacked sufficient quality assurance and quality control requirements necessary for EPA compliance assurance requirements: ASME PTC-38-80 R85 or C00049, "Determination of the Concentration of Particulate Matter in Gas Streams," for EPA Method 5; ASTM D3685/D3685M-98, "Test Methods for Sampling and Determination of Particulate Matter in Stack Gases," for EPA Method 5; ISO 9096:1992, "Determination of Concentration and Mass Flow Rate of Particulate Matter in Gas Carrying Ducts—Manual Gravimetric Method," for EPA Method 5; CAN/CSA Z223 1-M1977, "Method for the Determination of Particulate Mass Flows in Enclosed Gas Streams," for EPA Method 5; ISO 11632:1998, "Stationary Source Emissions—Determination of the Mass Concentration of Sulfur Dioxide—Ion Chromatography," for EPA Method 6; CAN/CSA Z223 24-M1983, "Method for the Measurement of Nitric Oxide and Nitrogen Dioxide in Air," for EPA Method 7; and CAN/CSA Z223 26-M1987, "Measurement of Total Mercury in Air Cold Vapour Atomic Absorption

Spectrophotometric Method," for EPA Method 29

The following four of the 24 voluntary consensus standards identified in this search were not available at the time the review was conducted for the purposes of this Federal plan because they are under development by a voluntary consensus body: ISO/DIS 12039, "Stationary Source Emissions—Determination of Carbon Monoxide, Carbon Dioxide, and Oxygen—Automated Methods," for EPA Method 3A; ASTM Z6449Z, "Standard Method for the Determination of Sulfur Dioxide in Stationary Sources," for EPA Method 6; ASTM Z6590Z, "Manual Method for Both Speciated and Elemental Mercury," for EPA Method 29 (portion for mercury only); pEN 13211 (1998), "Air Quality—Stationary Source Emissions—Determination of the Concentration of Total Mercury," for EPA Method 29 (portion for mercury only)

Table 1 of Subpart III lists the EPA testing methods included in the Federal plan emission requirements for commercial and industrial solid waste incinerators. Under 40 CFR 63.8(f) of Subpart A of the General Provisions, a source may apply to the EPA for permission to use alternative monitoring in place of any of the EPA testing methods.

J. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801, *et. seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency adopting the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of this rule in the Federal Register. This rule is not a "major rule" as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 62

Environmental protection, Air pollution control, Carbon monoxide, Metals, Nitrogen dioxide, Particulate matter, Sulfur oxides, Waste treatment and disposal

Dated: September 12, 2003.
Marianne Lamont Horinko,
Acting Administrator

■ 40 CFR part 62 is amended as follows:

PART 62—[AMENDED]

■ 1. The authority citation for part 62 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

■ 2. Amend § 62.13 by adding paragraph (d) to read as follows:

§ 62.13 Federal plans.

* * * * *

(d) The substantive requirements of the commercial and industrial solid waste incineration units Federal plan are contained in subpart III of this part. These requirements include emission limits, compliance schedules, testing, monitoring, and reporting and recordkeeping requirements.

■ 3. Amend part 62 by adding subpart III to read as follows:

Subpart III—Federal Plan Requirements for Commercial and Industrial Solid Waste Incineration Units That Commenced Construction On or Before November 30, 1999

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62.14500 What is the purpose of this subpart?

62.14505 What are the principal components of this subpart?

Applicability

62.14510 Am I subject to this subpart?

62.14515 Can my CISWI unit be covered by both a State plan and this subpart?

62.14520 How do I determine if my CISWI unit is covered by an approved and effective State or Tribal plan?

62.14521 If my CISWI unit is not listed in the Federal plan inventory, am I exempt from this subpart?

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62.14536 What steps are required to request an extension of the initial compliance date if I plan to continue operation of my CISWI unit?

62.14540 When must I complete each increment of progress?

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62.14555 What if I do not meet an increment of progress?

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62.14565 How do I comply with the increment of progress for achieving final compliance?

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62.14575 What must I do if I close my CISWI unit and then restart it?

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62.14635 What operating limits must I meet and by when?

62.14640 What if I do not use a wet scrubber to comply with the emission limitations?

62.14645 What happens during periods of startup, shutdown, and malfunction?

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Initial Compliance Requirements

62.14660 How do I demonstrate initial compliance with the emission limitations and establish the operating limits?

62.14665 By what date must I conduct the initial performance test?

Continuous Compliance Requirements

62.14670 How do I demonstrate continuous compliance with the emission limitations and the operating limits?

62.14675 By what date must I conduct the annual performance test?

62.14680 May I conduct performance testing less often?

62.14685 May I conduct a repeat performance test to establish new operating limits?

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62.14690 What monitoring equipment must I install and what parameters must I monitor?

62.14695 Is there a minimum amount of monitoring data I must obtain?

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- 62.14700 What records must I keep?
 62.14705 Where and in what format must I keep my records?
 62.14710 What reports must I submit?
 62.14715 When must I submit my waste management plan?
 62.14720 What information must I submit following my initial performance test?
 62.14725 When must I submit my annual report?
 62.14730 What information must I include in my annual report?
 62.14735 What else must I report if I have a deviation from the operating limits or the emission limitations?
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- 62.14765 What is an air curtain incinerator?
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 62.14815 What are the emission limitations for air curtain incinerators that burn 100 percent wood wastes, clean lumber and/or yard waste?
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- 62.13838 What authorities are withheld by the EPA Administrator?

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- 62.14840 What definitions must I know?

Tables

- Table 1 of Subpart III of Part 62—Emission Limitations
 Table 2 of Subpart III of Part 62—Operating Limits for Wet Scrubbers
 Table 3 of Subpart III of Part 62—Toxic Equivalency Factors

Table 4 of Subpart III of Part 62—Summary of Reporting Requirements**Introduction****§ 62.14500 What is the purpose of this subpart?**

(a) This subpart establishes emission requirements and compliance schedules for the control of emissions from commercial and industrial solid waste incineration (CISWI) units that are not covered by an EPA approved and currently effective State or Tribal plan. The pollutants addressed by these emission requirements are listed in Table 1 of this subpart. These emission requirements are developed in accordance with sections 111 and 129 of the Clean Air Act and subpart B of 40 CFR part 60.

(b) In this subpart, "you" means the owner or operator of a CISWI unit.

§ 62.14505 What are the principal components of this subpart?

This subpart contains the eleven major components listed in paragraphs (a) through (k) of this section.

- (a) Increments of progress toward compliance.
- (b) Waste management plan.
- (c) Operator training and qualification.
- (d) Emission limitations and operating limits.
- (e) Performance testing.
- (f) Initial compliance requirements.
- (g) Continuous compliance requirements.
- (h) Monitoring.
- (i) Recordkeeping and reporting.
- (j) Definitions.
- (k) Tables.

Applicability**§ 62.14510 Am I subject to this subpart?**

(a) You are subject to this subpart if you own or operate a CISWI unit as defined in § 62.14840 and the CISWI unit meets the criteria described in paragraphs (a)(1) through (a)(3) of this section.

(1) Construction of your CISWI unit commenced on or before November 30, 1999.

(2) Your CISWI unit is not exempt under § 62.14525.

(3) Your CISWI unit is not regulated by an EPA approved and currently effective State or Tribal plan, or your CISWI unit is located in any State whose approved State or Tribal plan is subsequently vacated in whole or in part.

(b) If you made changes after June 1, 2001 that meet the definition of modification or reconstruction after

promulgation of the final 40 CFR part 60 subpart CCCC (New Source Performance Standards for Commercial and Industrial Solid Waste Incineration Units); your CISWI unit is subject to subpart CCCC of 40 CFR part 60 and this subpart no longer applies to that unit.

(c) If you make physical or operational changes to your existing CISWI unit primarily to comply with this subpart, then such changes do not qualify as modifications or reconstructions under subpart CCCC of 40 CFR part 60.

§ 62.14515 Can my CISWI unit be covered by both a State plan and this subpart?

(a) If your CISWI unit is located in a State that does not have an EPA-approved State plan or your State's plan has not become effective, this subpart applies to your CISWI unit until the EPA approves a State plan that covers your CISWI unit and that State plan becomes effective. However, a State may enforce the requirements of a State regulation while your CISWI unit is still subject to this subpart.

(b) After the EPA approves a State plan covering your CISWI unit, and after that State plan becomes effective, you will no longer be subject to this subpart and will only be subject to the approved and effective State plan.

§ 62.14520 How do I determine if my CISWI unit is covered by an approved and effective State or Tribal plan?

This part (40 CFR part 62) contains a list of State and Tribal areas with approved Clean Air Act section 111(d) and section 129 plans along with the effective dates for such plans. The list is published annually. If this part does not indicate that your State or Tribal area has an approved and effective plan, you should contact your State environmental agency's air director or your EPA Regional Office to determine if the EPA has approved a State plan covering your unit since publication of the most recent version of this subpart.

§ 62.14521 If my CISWI unit is not listed in the Federal plan inventory, am I exempt from this subpart?

If a CISWI unit is not listed in the Federal plan inventory, it is not necessarily exempt from this subpart. Sources subject to this subpart are not limited to the inventory of sources listed in Docket A-2000-52 for the Federal plan. If your CISWI unit meets the applicability criteria in § 62.14510, this subpart applies to you whether or not your unit is listed in the Federal plan inventory in the docket.

§ 62.14525 Can my combustion unit be exempt from this subpart?

This subpart exempts 15 types of units described in paragraphs (a) through (o) of this section from complying with the requirements of this subpart except for the requirements specified in this section and in § 62.14531.

(a) *Pathological waste incineration units* Incineration units burning 90 percent or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste as defined in § 62.14840 are not subject to this subpart if you meet the two requirements specified in paragraphs (a)(1) and (2) of this section.

(1) Notify the Administrator that the unit meets these criteria.

(2) Keep records on a calendar quarter basis of the weight of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste burned, and the weight of all other fuels and wastes burned in the unit.

(b) *Agricultural waste incineration units* Incineration units burning 90 percent or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of agricultural wastes as defined in § 62.14840 are not subject to this subpart if you meet the two requirements specified in paragraphs (b)(1) and (2) of this section.

(1) Notify the Administrator that the unit meets these criteria.

(2) Keep records on a calendar quarter basis of the weight of agricultural waste burned, and the weight of all other fuels and wastes burned in the unit.

(c) *Municipal waste combustion units* Incineration units that meet either of the two criteria specified in paragraphs (c)(1) or (2) of this section.

(1) Units that are regulated under subpart Ea of 40 CFR part 60 (Standards of Performance for Municipal Waste Combustors); subpart Eb of 40 CFR part 60 (Standards of Performance for Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994); subpart Cb of 40 CFR part 60 (Emission Guidelines and Compliance Times for Large Municipal Waste Combustors Constructed on or Before September 20, 1994); subpart AAAA of 40 CFR part 60 (Standards of Performance for New Stationary Sources: Small Municipal Waste Combustion Units); subpart BBBB of 40 CFR part 60 (Emission Guidelines for Existing Stationary Sources: Small Municipal Waste Combustion Units); or subpart JJJ of 40 CFR part 62 (Federal

Plan Requirements for Small Municipal Waste Combustion Units Constructed on or Before August 30, 1999).

(2) Units that burn greater than 30 percent municipal solid waste or refuse-derived fuel, as defined in 40 CFR part 60 subpart Ea, subpart Eb, subpart AAAA, and subpart BBBB, and that have the capacity to burn less than 35 tons (32 megagrams) per day of municipal solid waste or refuse-derived fuel, if you meet the two requirements in paragraphs (c)(2)(i) and (ii) of this section.

(i) Notify the Administrator that the unit meets these criteria.

(ii) Keep records on a calendar quarter basis of the weight of municipal solid waste burned, and the weight of all other fuels and wastes burned in the unit.

(d) *Medical waste incineration units* Incineration units regulated under subpart Ec of 40 CFR part 60 (Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996); 40 CFR part 60 subpart Ce (Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators); and 40 CFR part 62 subpart HHH (Federal Plan Requirements for Hospital/Medical/Infectious Waste Incinerators Constructed on or before June 20, 1996)

(e) *Small power production facilities* Units that meet the three requirements specified in paragraphs (e)(1) through (3) of this section.

(1) The unit qualifies as a small power-production facility under section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)).

(2) The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity.

(3) You notify the Administrator that the unit meets all of these criteria.

(f) *Cogeneration facilities* Units that meet the three requirements specified in paragraphs (f)(1) through (3) of this section.

(1) The unit qualifies as a cogeneration facility under section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)).

(2) The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity and steam or other forms of energy used for industrial, commercial, heating, or cooling purposes.

(3) You notify the Administrator that the unit meets all of these criteria.

(g) *Hazardous waste combustion units* Units regulated under subpart EEE of part 63 (National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors).

(h) *Materials recovery units* Units that combust waste for the primary purpose of recovering metals, such as primary and secondary smelters.

(i) *Air curtain incinerators* Air curtain incinerators that burn 100 percent wood waste; 100 percent clean lumber; or a 100 percent mixture of only wood waste, clean lumber, and/or yard waste; are required to meet only the requirements under "Air Curtain Incinerators That Burn 100 Percent Wood Wastes, Clean Lumber and/or Yard Waste" (§§ 62.14765 through 62.14825) and the title V operating permit requirements (§§ 62.14830 and 62.14835).

(j) *Cyclonic barrel burners*.

(k) *Rack, part, and drum reclamation units*.

(l) *Cement kilns*.

(m) *Sewage sludge incinerators* Incineration units regulated under subpart O of 40 CFR part 60 (Standards of Performance for Sewage Treatment Plants).

(n) *Chemical recovery units* Combustion units burning materials to recover chemical constituents or to produce chemical compounds where there is an existing commercial market for such recovered chemical constituents or compounds. The eight types of units described in paragraphs (n)(1) through (8) of this section are considered chemical recovery units.

(1) Units burning only pulping liquors (*i.e.*, black liquor) that are reclaimed in a pulping liquor recovery process and reused in the pulping process.

(2) Units burning only spent sulfuric acid used to produce virgin sulfuric acid.

(3) Units burning only wood or coal feedstock for the production of charcoal.

(4) Units burning only manufacturing byproduct streams/residues containing catalyst metals which are reclaimed and reused as catalysts or used to produce commercial grade catalysts.

(5) Units burning only coke to produce purified carbon monoxide that is used as an intermediate in the production of other chemical compounds.

(6) Units burning only hydrocarbon liquids or solids to produce hydrogen, carbon monoxide, synthesis gas, or other gases for use in other manufacturing processes.

(7) Units burning only photographic film to recover silver.

(8) Units granted exemptions resulting from petitions submitted under the provisions of either § 60.2025 or § 60.2558.

(o) *Laboratory units* Units that burn samples of materials for the purpose of chemical or physical analysis

§ 62.14530 What if I have a chemical recovery unit that is not listed in § 62.14525(n)?

If you have a recovery unit that is not listed in § 62.14525(n), you can petition the Administrator to add the unit to the list of exempted units in 40 CFR 60.2020(n) or 60.2555(n) pursuant to the requirements of 40 CFR 60.2025 or 60.2558. Units granted exemptions under 40 CFR 60.2025 or 60.2558 are exempt from the requirement of this Federal plan under § 62.14525(n)(8).

§ 62.14531 When must I submit any records required pursuant to an exemption allowed under § 62.14525?

Owners or operators of sources that qualify for the exemptions in § 62.14525(a) through (o) must submit any records required to support their claims of exemption to the EPA Administrator (or delegated enforcement authority) upon request. Upon request by any person under the regulation at part 2 of this chapter (or a comparable law or regulation governing a delegated enforcement authority), the EPA Administrator (or delegated enforcement authority) must request the records in § 62.14525(a) through (o) from an owner or operator and make such records available to the requestor to the extent required by part 2 of this chapter (or a comparable law governing a delegated enforcement authority). Any records required under § 62.14525(a) through (o) must be maintained by the source for a period of at least 5 years. Notifications of exemption claims required under § 62.14525(a) through (o) of this section must be maintained by the EPA or delegated enforcement authority for a period of at least 5 years. Any information obtained from an owner or operator of a source accompanied by a claim of confidentiality will be treated in accordance with the regulations in part 2 of this chapter (or a comparable law governing a delegated enforcement authority).

Compliance Schedule and Increments of Progress

§ 62.14535 When must I comply with this subpart if I plan to continue operation of my CISWI unit?

If you plan to continue operation of your CISWI unit, then you must follow the requirements in paragraph (a) or (b) of this section depending on when you plan to come into compliance with the requirements of this subpart.

(a) If you plan to continue operation and come into compliance with the requirements of this subpart by October 4, 2004, then you must complete the

requirements of paragraphs (a)(1) through (a)(5) of this section.

(1) You must comply with the operator training and qualification requirements and inspection requirements (if applicable) of this subpart by October 4, 2004.

(2) You must submit a waste management plan no later than April 5, 2004.

(3) You must achieve final compliance by October 4, 2004. To achieve final compliance, you must incorporate all process changes and complete retrofit construction of control devices, as specified in the final control plan, so that, if the affected CISWI unit is brought online, all necessary process changes and air pollution control devices would operate as designed.

(4) You must conduct the initial performance test within 90 days after the date when you are required to achieve final compliance under paragraph (a)(3) of this section.

(5) You must submit an initial report including the results of the initial performance test no later than 60 days following the initial performance test (see §§ 62.14700 through 62.14760 for complete reporting and recordkeeping requirements).

(b) If you plan to continue operation and come into compliance with the requirements of this subpart after October 4, 2004, but before October 3, 2005 you must petition for and be granted an extension of the final compliance date specified in § 62.14535(a)(3) by meeting the requirements of § 62.14536 and you must meet the requirements for increments of progress specified in § 62.14540 through § 62.14565. To achieve the final compliance increment of progress, you must complete the requirements of paragraphs (b)(1) through (b)(5) of this section.

(1) You must comply with the operator training and qualification requirements and inspection requirements (if applicable) of this subpart by October 4, 2004.

(2) You must submit a waste management plan no later than April 5, 2004.

(3) You must achieve final compliance by October 3, 2005. For the final compliance increment of progress, you must incorporate all process changes and complete retrofit construction of control devices, as specified in the final control plan, so that, when the affected CISWI unit is brought online, all necessary process changes and air pollution control devices operate as designed.

(4) You must conduct the initial performance test within 90 days after

the date when you are required to achieve final compliance under paragraph (b)(3) of this section.

(5) You must submit an initial report including the result of the initial performance no later than 60 days following the initial performance test (see §§ 62.14700 through 62.14760 for complete reporting and recordkeeping requirements).

§ 62.14536 What steps are required to request an extension of the initial compliance date if I plan to continue operation of my CISWI unit?

If you plan to continue operation and want to come into compliance with the requirements of this subpart after October 4, 2004, but before October 3, 2005, then you must petition to the Administrator to grant you an extension by following the procedures outlined in paragraphs (a) and (b) of this section.

(a) You must submit your request for an extension to the EPA Administrator (or delegated enforcement authority) on or before December 3, 2003.

(b) Your request must include documentation of the analyses undertaken to support your need for an extension, including an explanation of why you are unable to meet the final compliance date specified in § 62.14535(a)(3) and why your requested extension date is needed to provide sufficient time for you to design, fabricate, and install the emissions control systems necessary to meet the requirements of this Subpart. A request based upon the avoidance of costs of meeting provisions of this Subpart is not acceptable and will be denied.

§ 62.14540 When must I complete each increment of progress?

If you plan to come into compliance after October 4, 2004, you must meet the two increments of progress specified in paragraphs (a) and (b) of this section.

(a) Increment 1. Submit a final control plan by April 5, 2004.

(b) Increment 2. Reach final compliance by October 3, 2005.

§ 62.14545 What must I include in each notification of achievement of an increment of progress?

Your notification of achievement of an increment of progress must include the four items specified in paragraphs (a) through (d) of this section.

(a) Notification of the date that the increment of progress has been achieved.

(b) Any items required to be submitted with each increment of progress.

(c) Signature of the owner or operator of the CISWI unit.

(d) The date you were required to complete the increment of progress

§ 62.14550 When must I submit a notification of achievement of the first increment of progress?

Your notification for achieving the first increment of progress must be postmarked no later than April 15, 2004

§ 62.14555 What if I do not meet an increment of progress?

Failure to meet an increment of progress is a violation of the standards under this subpart. If you fail to meet an increment of progress, you must submit a notification to the Administrator postmarked within 10 business days after the due date for that increment of progress. You must inform the Administrator that you did not meet the increment, and you must continue to submit reports each subsequent calendar month until the increment of progress is met.

§ 62.14560 How do I comply with the increment of progress for submittal of a control plan?

For your control plan increment of progress, you must satisfy the two requirements specified in paragraphs (a) and (b) of this section.

(a) Submit the final control plan that includes the six items described in paragraphs (a)(1) through (6) of this section.

(1) A description of the devices for air pollution control and process changes that you will use to comply with the emission limitations and other requirements of this subpart.

(2) The type(s) of waste to be burned.

(3) The maximum design waste burning capacity

(4) The anticipated maximum charge rate

(5) If applicable, the petition for site-specific operating limits under § 62.14640

(6) A schedule that includes the date by which you will award the contracts to procure emission control equipment or related materials, initiate on-site construction, initiate on-site installation of emission control equipment, and/or incorporate process changes, and the date by which you will initiate on-site construction.

(b) Maintain an on-site copy of the final control plan.

§ 62.14565 How do I comply with the increment of progress for achieving final compliance?

For the final compliance increment of progress, you must incorporate all process changes and complete retrofit construction of control devices, as specified in the final control plan, so that, when the affected CISWI unit is brought online, all necessary process changes and air pollution control devices operate as designed

§ 62.14570 What must I do if I plan to permanently close my CISWI unit?

If you plan to permanently close your CISWI unit, then you must follow the requirements in either paragraph (a) or (b) of this section depending on when you plan to shut down

(a) If you plan to shut down by October 4, 2004, rather than come into compliance with the complete set of requirements in this subpart, then you must shut down by October 4, 2004. In addition, while still in operation, your CISWI unit is subject to the same

requirement to apply for and obtain a title V operating permit that applies to a CISWI unit that will not be permanently closing. See §§ 62.14830 and 62.14835.

(b) If you plan to shut down rather than come into compliance with the complete set of requirements of this subpart, but are unable to shut down by October 4, 2004, then you must petition EPA for and be granted an extension by following the procedures outlined in paragraphs (b)(1) through (5) of this section

(1) You must submit your request for an extension to the EPA Administrator (or delegated enforcement authority) by December 3, 2003. Your request must include:

(i) Documentation of the analyses undertaken to support your need for an extension, including an explanation of why your requested extension date is sufficient time for you to shut down while October 4, 2004 does not provide sufficient time for shut down. A request based upon the avoidance of costs of meeting provisions of this subpart is not acceptable and will be denied. Your documentation must include an evaluation of the option to transport your waste offsite to a commercial or municipal waste treatment and/or disposal facility on a temporary or permanent basis; and

(ii) Documentation of incremental steps of progress, including dates for completing the increments of progress, that you will take towards shutting down. Some suggested incremental steps of progress towards shut down are provided as follows:

If you	Then your increments of progress could be
(A) Need an extension so you can install an onsite alternative waste treatment technology before you shut down your CISWI.	(1) Date when you will enter into a contract with an alternative treatment technology vendor, (2) Date for initiating onsite construction or installation of the alternative technology, (3) Date for completing onsite construction or installation of the alternative technology, and (4) Date for shutting down the CISWI.
(B) Need an extension so you can acquire the services of a commercial waste disposal company before you shut down your CISWI.	(1) Date when price quotes will be obtained from commercial disposal companies, (2) Date when you will enter into a contract with a commercial disposal company, and (3) Date for shutting down the CISWI.

(2) You must shut down no later than by October 3, 2005

(3) You must comply with the operator training and qualification requirements (if applicable) of this subpart by October 4, 2004

(4) You must submit a legally binding closure agreement to the Administrator

by April 5, 2004. The closure agreement must specify the date by which operation will cease. The closure date cannot be later than October 3, 2005

(5) While still in operation, your CISWI unit is subject to the same requirement to apply for and obtain a title V operating permit that applies to a CISWI unit that will not be

permanently closing. See §§ 62.14830 and 62.14835

§ 62.14575 What must I do if I close my CISWI unit and then restart it?

If you temporarily close your CISWI unit and restart the unit for the purpose of continuing operation of your CISWI unit, then you must follow the

requirements in paragraphs (a), (b), or (c) of this section depending on when you plan to come into compliance with the requirements of this subpart. You are subject to the operating permit requirements of title V of the CAA and 40 CFR part 70 or 71 until you close your CISWI unit and at the time you restart it.

(a) If you plan to continue operation and come into compliance with the requirements of this subpart by October 4, 2004, then you must complete the requirements of § 62.14535(a).

(b) If you plan to continue operation and come into compliance with the requirements of this subpart on or before October 3, 2005, then you must complete the requirements of § 62.14535(b). You must have first requested and been granted an extension from the initial compliance date by following the requirements of § 62.14536.

(c) If you restart your CISWI unit after the October 4, 2004 and resume operation, but have not previously requested an extension by meeting all of the requirements of § 62.14536, you must meet all of the requirements of § 62.14535(a)(1) through (a)(5) at the time you restart your CISWI unit. Upon restarting your CISWI unit, you must have incorporated all process changes and completed retrofit construction of control devices so that when the affected CISWI unit is brought online, all necessary process changes and air pollution control devices operate as designed.

Waste Management Plan

§ 62.14580 What is a waste management plan?

A waste management plan is a written plan that identifies both the feasibility and the methods used to reduce or separate certain components of solid waste from the waste stream in order to reduce or eliminate toxic emissions from incinerated waste.

§ 62.14585 When must I submit my waste management plan?

You must submit a waste management plan no later than April 5, 2004.

§ 62.14590 What should I include in my waste management plan?

A waste management plan must include consideration of the reduction or separation of waste-stream elements such as paper, cardboard, plastics, glass, batteries, or metals; or the use of recyclable materials. The plan must identify any additional waste management measures, and the source must implement those measures considered practical and feasible, based

on the effectiveness of waste management measures already in place, the costs of additional measures, the emissions reductions expected to be achieved, and any other environmental or energy impacts they might have.

Operator Training and Qualification

§ 62.14595 What are the operator training and qualification requirements?

(a) You must have a fully trained and qualified CISWI unit operator accessible at all times when the unit is in operation, either at your facility or able to be at your facility within one hour. The trained and qualified CISWI unit operator may operate the CISWI unit directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified CISWI unit operators are temporarily not accessible, you must follow the procedures in § 62.14625.

(b) Operator training and qualification must be obtained through a State-approved program or by completing the requirements included in paragraph (c) of this section.

(c) Training must be obtained by completing an incinerator operator training course that includes, at a minimum, the three elements described in paragraphs (c)(1) through (3) of this section.

(1) Training on the thirteen subjects listed in paragraphs (c)(1)(i) through (xiii) of this section.

(i) Environmental concerns, including types of emissions.

(ii) Basic combustion principles, including products of combustion.

(iii) Operation of the specific type of incinerator to be used by the operator, including proper startup, waste charging, and shutdown procedures.

(iv) Combustion controls and monitoring.

(v) Operation of air pollution control equipment and factors affecting performance (where applicable).

(vi) Inspection and maintenance of the incinerator and air pollution control devices.

(vii) Actions to correct malfunctions or conditions that may lead to malfunction.

(viii) Bottom and fly ash characteristics and handling procedures.

(ix) Applicable Federal, State, and local regulations, including Occupational Safety and Health Administration workplace standards.

(x) Pollution prevention.

(xi) Waste management practices.

(xii) Recordkeeping requirements.

(xiii) Methods to continuously monitor CISWI unit and air pollution control device operating parameters and

monitoring equipment calibration procedures (where applicable).

(2) An examination designed and administered by the instructor.

(3) Written material covering the training course topics that can serve as reference material following completion of the course.

§ 62.14600 When must the operator training course be completed?

(a) The operator training course must be completed by the later of the two dates specified in paragraphs (a)(1) and (2) of this section.

(1) October 4, 2004.

(2) Six months after an employee assumes responsibility for operating the CISWI unit or assumes responsibility for supervising the operation of the CISWI unit.

(b) You must follow the requirements in § 63.14625 if all qualified operators are temporarily not accessible.

§ 62.14605 How do I obtain my operator qualification?

(a) You must obtain operator qualification by completing a training course that satisfies the criteria under § 62.14595(b) or (c).

(b) Qualification is valid from the date on which the training course is completed and the operator successfully passes the examination required under § 62.14595(c)(2).

§ 62.14610 How do I maintain my operator qualification?

To maintain qualification, you must complete an annual review or refresher course of at least 4 hours covering, at a minimum, the five topics described in paragraphs (a) through (e) of this section.

(a) Update of regulations.

(b) Incinerator operation, including startup and shutdown procedures, waste charging, and ash handling.

(c) Inspection and maintenance.

(d) Responses to malfunctions or conditions that may lead to malfunction.

(e) Discussion of operating problems encountered by attendees.

§ 62.14615 How do I renew my lapsed operator qualification?

You must renew a lapsed operator qualification by one of the two methods specified in paragraphs (a) and (b) of this section.

(a) For a lapse of less than 3 years, you must complete a standard annual refresher course described in § 62.14610.

(b) For a lapse of 3 years or more, you must repeat the initial qualification requirements in § 62.14605(a).

§ 62.14620 What site-specific documentation is required?

(a) Documentation must be available at the facility and readily accessible for all CISWI unit operators that addresses the ten topics described in paragraphs (a)(1) through (10) of this section. You must maintain this information and the training records required by paragraph (c) of this section in a manner that they can be readily accessed and are suitable for inspection upon request.

(1) Summary of the applicable standards under this subpart.

(2) Procedures for receiving, handling, and charging waste.

(3) Incinerator startup, shutdown, and malfunction procedures.

(4) Procedures for maintaining proper combustion air supply levels.

(5) Procedures for operating the incinerator and associated air pollution control systems within the standards established under this subpart.

(6) Monitoring procedures for demonstrating compliance with the incinerator operating limits.

(7) Reporting and recordkeeping procedures.

(8) The waste management plan required under §§ 62.14580 through 62.14590.

(9) Procedures for handling ash.

(10) A list of the wastes burned during the performance test.

(b) You must establish a program for reviewing the information listed in paragraph (a) of this section with each employee who operates your incinerator.

(1) The initial review of the information listed in paragraph (a) of this section must be conducted by the later of the two dates specified in paragraphs (b)(1)(i) through (ii) of this section:

(i) October 4, 2004.

(ii) Two months after being assigned to operate the CISWI unit.

(2) Subsequent annual reviews of the information listed in paragraph (a) of this section must be conducted no later than 12 months following the previous review.

(c) You must also maintain the information specified in paragraphs (c)(1) through (3) of this section:

(1) Records showing the names of all plant personnel who operate your CISWI unit who have completed review of the information in § 62.14620(a) as required by § 62.14620(b), including the date of the initial review and all subsequent annual reviews.

(2) Records showing the names of all plant personnel who operate your CISWI unit who have completed the operator training requirements under § 62.14595, met the criteria for

qualification under § 62.14605, and maintained or renewed their qualification under § 62.14610 or § 62.14615. Records must include documentation of training, the dates of the initial refresher training, and the dates of their qualification and all subsequent renewals of such qualifications.

(3) For each qualified operator, the phone and/or pager number at which they can be reached during operating hours.

§ 62.14625 What if all the qualified operators are temporarily not accessible?

If all qualified operators are temporarily not accessible (i.e., not at the facility and not able to be at the facility within 1 hour), you must meet one of the two criteria specified in paragraphs (a) and (b) of this section, depending on the length of time that a qualified operator is not accessible.

(a) When all qualified operators are not accessible for more than 8 hours, but less than 2 weeks, the CISWI unit may be operated by other plant personnel familiar with the operation of the CISWI unit who have completed a review of the information specified in § 62.14620(a) within the past 12 months. However, you must record the period when all qualified operators were not accessible and include this deviation in the annual report as specified under § 62.14730.

(b) When all qualified operators are not accessible for 2 weeks or more, you must take the two actions that are described in paragraphs (b)(1) and (2) of this section.

(1) Notify the Administrator of this deviation in writing within 10 days. In the notice, state what caused this deviation, what you are doing to ensure that a qualified operator is accessible, and when you anticipate that a qualified operator will be accessible.

(2) Submit a status report to the Administrator every 4 weeks outlining what you are doing to ensure that a qualified operator is accessible, stating when you anticipate that a qualified operator will be accessible and requesting approval from the Administrator to continue operation of the CISWI unit. You must submit the first status report 4 weeks after you notify the Administrator of the deviation under paragraph (b)(1) of this section. If the Administrator notifies you that your request to continue operation of the CISWI unit is disapproved, the CISWI unit may continue operation for 90 days, then must cease operation. Operation of the unit may resume if you meet the two

requirements in paragraphs (b)(2)(i) and (ii) of this section.

(i) A qualified operator is accessible as required under § 62.14595(a).

(ii) You notify the Administrator that a qualified operator is accessible and that you are resuming operation.

Emission Limitations and Operating Limits**§ 62.14630 What emission limitations must I meet and by when?**

You must meet the emission limitations specified in table 1 of this subpart by the applicable final compliance date for your CISWI unit.

§ 62.14635 What operating limits must I meet and by when?

(a) If you use a wet scrubber to comply with the emission limitations, you must establish operating limits for four operating parameters (as specified in table 2 of this subpart) as described in paragraphs (a)(1) through (4) of this section during the initial performance test.

(1) Maximum charge rate, calculated using one of the two different procedures in paragraph (a)(1)(i) or (ii) of this section, as appropriate.

(i) For continuous and intermittent units, maximum charge rate is 110 percent of the average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(ii) For batch units, maximum charge rate is 110 percent of the daily charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(2) Minimum pressure drop across the wet scrubber, which is calculated as 90 percent of the average pressure drop across the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations; or minimum amperage to the wet scrubber, which is calculated as 90 percent of the average amperage to the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations.

(3) Minimum scrubber liquor flow rate, which is calculated as 90 percent of the average liquor flow rate at the inlet to the wet scrubber measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(4) Minimum scrubber liquor pH, which is calculated as 90 percent of the average liquor pH at the inlet to the wet scrubber measured during the most

recent performance test demonstrating compliance with the hydrogen chloride emission limitation.

(b) You must meet the operating limits established during the initial performance test on the date the initial performance test is required or completed (whichever is earlier).

(c) If you use a fabric filter to comply with the emission limitations, you must operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during any 6-month period. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by you to initiate corrective action.

§ 62.14640 What if I do not use a wet scrubber to comply with the emission limitations?

If you use an air pollution control device other than a wet scrubber, or limit emissions in some other manner, to comply with the emission limitations under § 62.14630, you must petition the Administrator for specific operating limits to be established during the initial performance test and continuously monitored thereafter. You must not conduct the initial performance test until after the petition has been approved by the Administrator. Your petition must include the five items listed in paragraphs (a) through (e) of this section.

(a) Identification of the specific parameters you propose to use as additional operating limits.

(b) A discussion of the relationship between these parameters and emissions of regulated pollutants, identifying how emissions of regulated pollutants change with changes in these parameters, and how limits on these parameters will serve to limit emissions of regulated pollutants.

(c) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the operating limits on these parameters.

(d) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments.

(e) A discussion identifying the frequency and methods for recalibrating

the instruments you will use for monitoring these parameters.

§ 62.14645 What happens during periods of startup, shutdown, and malfunction?

(a) The emission limitations and operating limits apply at all times except during periods of CISWI unit startup, shutdown, or malfunction as defined in § 62.14840.

(b) Each malfunction must last no longer than 3 hours.

Performance Testing

§ 62.14650 How do I conduct the initial and annual performance test?

(a) All performance tests must consist of a minimum of three test runs conducted under conditions representative of normal operations.

(b) You must document that the waste burned during the performance test is representative of the waste burned under normal operating conditions by maintaining a log of the quantity of waste burned (as required in § 62.14700(b)(1)) and the types of waste burned during the performance test.

(c) All performance tests must be conducted using the minimum run duration specified in Table 1 of this subpart.

(d) Method 1 of 40 CFR part 60, Appendix A must be used to select the sampling location and number of traverse points.

(e) Method 3A or 3B of 40 CFR part 60, Appendix A must be used for gas composition analysis, including measurement of oxygen concentration. Method 3A or 3B of 40 CFR part 60, Appendix A must be used simultaneously with each method.

(f) All pollutant concentrations, except for opacity, must be adjusted to 7 percent oxygen using Equation 1 of this section:

$$C_{adj} = C_{meas} (20.9 - 7) / (20.9 - \%O_2)$$

(Eq. 1)

Where:

C_{adj} = pollutant concentration adjusted to 7 percent oxygen;

C_{meas} = pollutant concentration measured on a dry basis;

$(20.9 - 7)$ = 20.9 percent oxygen - 7 percent oxygen (defined oxygen correction basis);

20.9 = oxygen concentration in air, percent; and

$\%O_2$ = oxygen concentration measured on a dry basis, percent.

(g) You must determine dioxins/furans toxic equivalency by following the procedures in paragraphs (g)(1) through (3) of this section.

(1) Measure the concentration of each dioxin/furan tetra- through octa-congener emitted using EPA Method 23

(2) For each dioxin/furan congener measured in accordance with paragraph (g)(1) of this section, multiply the congener concentration by its corresponding toxic equivalency factor specified in Table 3 of this subpart.

(3) Sum the products calculated in accordance with paragraph (g)(2) of this section to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.

§ 62.14655 How are the performance test data used?

You use results of performance tests to demonstrate compliance with the emission limitations in Table 1 of this subpart.

Initial Compliance Requirements

§ 62.14660 How do I demonstrate initial compliance with the emission limitations and establish the operating limits?

You must conduct an initial performance test, as required under 40 CFR 60.8, to determine compliance with the emission limitations in Table 1 of this subpart and to establish operating limits using the procedure in § 62.14635 or § 62.14640. The initial performance test must be conducted using the test methods listed in table 1 of this subpart and the procedures in § 62.14650.

§ 62.14665 By what date must I conduct the initial performance test?

The initial performance test must be conducted no later than 90 days after your final compliance date.

Continuous Compliance Requirements

§ 62.14670 How do I demonstrate continuous compliance with the emission limitations and the operating limits?

(a) You must conduct an annual performance test for particulate matter, hydrogen chloride, and opacity for each CISWI unit as required under 40 CFR 60.8 to determine compliance with the emission limitations. The annual performance test must be conducted using the test methods listed in table 1 of this subpart and the procedures in § 62.14650.

(b) You must continuously monitor the operating parameters specified in § 62.14635 or established under § 62.14640. Operation above the established maximum or below the established minimum operating limits constitutes a deviation from the established operating limits. Three-hour rolling average values are used to determine compliance (except for baghouse leak detection system alarms) unless a different averaging period is established under § 62.14640. Operating limits do not apply during performance tests.

(c) You must only burn the same types of waste used to establish operating limits during the performance test.

§ 62.14675 By what date must I conduct the annual performance test?

You must conduct annual performance tests for particulate matter, hydrogen chloride, and opacity within 12 months following the initial performance test. Conduct subsequent annual performance tests within 12 months following the previous one.

§ 62.14680 May I conduct performance testing less often?

(a) You can test less often for a given pollutant if you have test data for at least 3 years, and all performance tests for the pollutant (particulate matter, hydrogen chloride, or opacity) over 3 consecutive years show that you comply with the emission limitation. In this case, you do not have to conduct a performance test for that pollutant for the next 2 years. You must conduct a performance test during the third year and no later than 36 months following the previous performance test.

(b) If your CISWI unit continues to meet the emission limitation for particulate matter, hydrogen chloride, or opacity, you may choose to conduct performance tests for these pollutants every third year, but each test must be within 36 months of the previous performance test.

(c) If a performance test shows a deviation from an emission limitation for particulate matter, hydrogen chloride, or opacity, you must conduct annual performance tests for that pollutant until all performance tests over a 3-year period show compliance.

§ 62.14685 May I conduct a repeat performance test to establish new operating limits?

(a) Yes. You may conduct a repeat performance test at any time to establish new values for the operating limits. The Administrator may request a repeat performance test at any time.

(b) You must repeat the performance test if your feed stream is different than the feed streams used during any performance test used to demonstrate compliance.

Monitoring

§ 62.14690 What monitoring equipment must I install and what parameters must I monitor?

(a) If you are using a wet scrubber to comply with the emission limitation under § 62.14630, you must install, calibrate (to manufacturers' specifications), maintain, and operate devices (or establish methods) for

monitoring the value of the operating parameters used to determine compliance with the operating limits listed in table 2 of this subpart. These devices (or methods) must measure and record the values for these operating parameters at the frequencies indicated in table 2 of this subpart at all times except as specified in § 62.14695(a).

(b) If you use a fabric filter to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate a bag leak detection system as specified in paragraphs (b)(1) through (8) of this section.

(1) You must install and operate a bag leak detection system for each exhaust stack of the fabric filter.

(2) Each bag leak detection system must be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

(3) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less.

(4) The bag leak detection system sensor must provide output of relative or absolute particulate matter loadings.

(5) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor.

(6) The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative particulate matter emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel.

(7) For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. For negative pressure or induced air fabric filters, the bag leak detector must be installed downstream of the fabric filter.

(8) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(c) If you are using an emission control system other than a wet scrubber to comply with the emission limitations under § 62.14630, you must install, calibrate (to the manufacturers' specifications), maintain, and operate the equipment necessary to monitor compliance with the site-specific operating limits established using the procedures in § 62.14640.

§ 62.14695 Is there a minimum amount of monitoring data I must obtain?

(a) Except for monitoring malfunctions, associated repairs, and required quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments of the monitoring system), you must conduct all monitoring at all times the CISWI unit is operating.

(b) Do not use data recorded during monitor malfunctions, associated repairs, and required quality assurance or quality control activities for meeting the requirements of this subpart, including data averages and calculations. You must use all the data collected during all other periods in assessing compliance with the operating limits.

Recordkeeping and Reporting

§ 62.14700 What records must I keep?

You must maintain the 13 items (as applicable) as specified in paragraphs (a) through (m) of this section for a period of at least 5 years:

(a) Calendar date of each record.

(b) Records of the data described in paragraphs (b)(1) through (6) of this section:

(1) The CISWI unit charge dates, times, weights, and hourly charge rates.

(2) Liquor flow rate to the wet scrubber inlet every 15 minutes of operation, as applicable.

(3) Pressure drop across the wet scrubber system every 15 minutes of operation or amperage to the wet scrubber every 15 minutes of operation, as applicable.

(4) Liquor pH as introduced to the wet scrubber every 15 minutes of operation, as applicable.

(5) For affected CISWI units that establish operating limits for controls other than wet scrubbers under § 62.14640, you must maintain data collected for all operating parameters used to determine compliance with the operating limits.

(6) If a fabric filter is used to comply with the emission limitations, you must record the date, time, and duration of each alarm and the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken. You must also record the percent of operating time during each 6-month period that the alarm sounds, calculated as specified in § 62.14635(c).

(c) Identification of calendar dates and times for which monitoring systems used to monitor operating limits were inoperative, inactive, malfunctioning, or out of control (except for downtime).

associated with zero and span and other routine calibration checks) Identify the operating parameters not measured, the duration, reasons for not obtaining the data, and a description of corrective actions taken.

(d) Identification of calendar dates, times, and durations of malfunctions, and a description of the malfunction and the corrective action taken

(e) Identification of calendar dates and times for which data show a deviation from the operating limits in table 2 of this subpart or a deviation from other operating limits established under § 62.14640 with a description of the deviations, reasons for such deviations, and a description of corrective actions taken

(f) The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating limits, as applicable. Retain a copy of the complete test report including calculations

(g) Records showing the names of CISWI unit operators who have completed review of the information in § 62.14620(a) as required by § 62.14620(b), including the date of the initial review and all subsequent annual reviews

(h) Records showing the names of the CISWI operators who have completed the operator training requirements under § 62.14595, met the criteria for qualification under § 62.14605, and maintained or renewed their qualification under § 62.14610 or § 62.14615. Records must include documentation of training, the dates of the initial and refresher training, and the dates of their qualification and all subsequent renewals of such qualifications

(i) For each qualified operator, the phone and/or pager number at which they can be reached during operating hours.

(j) Records of calibration of any monitoring devices as required under § 62.14690.

(k) Equipment vendor specifications and related operation and maintenance requirements for the incinerator, emission controls, and monitoring equipment

(l) The information listed in § 62.14620(a).

(m) On a daily basis, keep a log of the quantity of waste burned and the types of waste burned (always required)

§ 62.14705 Where and in what format must I keep my records?

All records must be available onsite in either paper copy or computer-readable format that can be printed upon request,

unless an alternative format is approved by the Administrator.

§ 62.14710 What reports must I submit?

See table 4 of this subpart for a summary of the reporting requirements

§ 62.14715 When must I submit my waste management plan?

You must submit the waste management plan no later than April 5, 2004

§ 62.14720 What information must I submit following my initial performance test?

You must submit the information specified in paragraphs (a) through (c) of this section no later than 60 days following the initial performance test. All reports must be signed by the facilities manager.

(a) The complete test report for the initial performance test results obtained under § 62.14660, as applicable

(b) The values for the site-specific operating limits established in § 62.14635 or § 62.14640.

(c) If you are using a fabric filter to comply with the emission limitations, documentation that a bag leak detection system has been installed and is being operated, calibrated, and maintained as required by § 62.14690(b).

§ 62.14725 When must I submit my annual report?

You must submit an annual report no later than 12 months following the submission of the information in § 62.14720. You must submit subsequent reports no more than 12 months following the previous report. As with all other requirements in this subpart, the requirement to submit an annual report does not modify or replace the operating permit requirements of 40 CFR parts 70 and 71

§ 62.14730 What information must I include in my annual report?

The annual report required under § 62.14725 must include the ten items listed in paragraphs (a) through (j) of this section. If you have a deviation from the operating limits or the emission limitations, you must also submit deviation reports as specified in §§ 62.14735, 62.14740, and 62.14745

(a) Company name and address.
(b) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report

(c) Date of report and beginning and ending dates of the reporting period.

(d) The values for the operating limits established pursuant to § 62.14635 or § 62.14640.

(e) If no deviation from any emission limitation or operating limit that applies

to you has been reported, a statement that there was no deviation from the emission limitations or operating limits during the reporting period, and that no monitoring system used to determine compliance with the operating limits was inoperative, inactive, malfunctioning or out of control.

(f) The highest recorded 3-hour average and the lowest recorded 3-hour average, as applicable, for each operating parameter recorded for the calendar year being reported.

(g) Information recorded under § 62.14700(b)(6) and (c) through (e) for the calendar year being reported.

(h) If a performance test was conducted during the reporting period, the results of that test.

(i) If you met the requirements of § 62.14680(a) or (b), and did not conduct a performance test during the reporting period, you must state that you met the requirements of § 62.14680(a) or (b), and, therefore, you were not required to conduct a performance test during the reporting period.

(j) Documentation of periods when all qualified CISWI unit operators were unavailable for more than 8 hours, but less than 2 weeks.

§ 62.14735 What else must I report if I have a deviation from the operating limits or the emission limitations?

(a) You must submit a deviation report if any recorded 3-hour average parameter level is above the maximum operating limit or below the minimum operating limit established under this subpart, if the bag leak detection system alarm sounds for more than 5 percent of the operating time for any 6-month reporting period, or if a performance test was conducted that yielded results that deviated from any emission limitation

(b) The deviation report must be submitted by August 1 of that year for data collected during the first half of the calendar year (January 1 to June 30), and by February 1 of the following year for data you collected during the second half of the calendar year (July 1 to December 31).

§ 62.14740 What must I include in the deviation report?

In each report required under § 62.14735, for any pollutant or parameter that deviated from the emission limitations or operating limits specified in this subpart, include the six items described in paragraphs (a) through (f) of this section.

(a) The calendar dates and times your unit deviated from the emission limitations or operating limit requirements.

(b) The averaged and recorded data for those dates.

(c) Duration and causes of each deviation from the emission limitations or operating limits and your corrective actions.

(d) A copy of the operating limit monitoring data during each deviation and any test report that documents the emission levels.

(e) The dates, times, number, duration, and causes for monitoring downtime incidents (other than downtime associated with zero, span, and other routine calibration checks).

(f) Whether each deviation occurred during a period of startup, shutdown, or malfunction, or during another period.

§ 62.14745 What else must I report if I have a deviation from the requirement to have a qualified operator accessible?

(a) If all qualified operators are not accessible for two weeks or more, you must take the two actions in paragraphs (a)(1) and (2) of this section.

(1) Within 10 days of each deviation, you must submit a notification that includes the three items in paragraphs (a)(1)(i) through (iii) of this section.

(i) A statement of what caused the deviation.

(ii) A description of what you are doing to ensure that a qualified operator is accessible.

(iii) The date when you anticipate that a qualified operator will be available.

(2) Submit a status report to the Administrator every 4 weeks that includes the three items in paragraphs (a)(2)(i) through (iii) of this section.

(i) A description of what you are doing to ensure that a qualified operator is accessible.

(ii) The date when you anticipate that a qualified operator will be accessible.

(iii) Request approval from the Administrator to continue operation of the CISWI unit.

(b) If your unit was shut down by the Administrator, under the provisions of § 62.14625(b)(2), due to a failure to provide an accessible qualified operator, you must notify the Administrator that you are resuming operation once a qualified operator is accessible.

§ 62.14750 Are there any other notifications or reports that I must submit?

You must submit notifications as provided by 40 CFR 60.7.

§ 62.14755 In what form can I submit my reports?

Submit initial, annual, and deviation reports electronically or in paper format, postmarked on or before the submittal due dates.

§ 62.14760 Can reporting dates be changed?

If the Administrator agrees, you may change the semiannual or annual reporting dates. See 40 CFR 60.19(c) for

procedures to seek approval to change your reporting date.

Air Curtain Incinerators That Burn 100 Percent Wood Wastes, Clean Lumber and/or Yard Waste

§ 62.14765 What is an air curtain incinerator?

An air curtain incinerator operates by forcefully projecting a curtain of air across an open chamber or open pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor. (Air curtain incinerators are different from conventional combustion devices which typically have enclosed fireboxes and controlled air technology such as mass burn, modular, and fluidized bed combustors.)

§ 62.14770 When must I achieve final compliance?

If you plan to continue operating, then you must achieve final compliance by October 4, 2004. It is unlawful for your air curtain incinerator to operate after October 4, 2004 if you have not achieved final compliance. An air curtain incinerator that continues to operate after October 4, 2004 without being in compliance is subject to penalties.

§ 62.14795 How do I achieve final compliance?

For the final compliance, you must complete all equipment changes and retrofit installation control devices so that, when the affected air curtain incinerator is placed into service, all necessary equipment and air pollution control devices operate as designed and meet the opacity limits of § 62.14815.

§ 62.14805 What must I do if I close my air curtain incinerator and then restart it?

(a) If you close your incinerator but will reopen it prior to the final compliance date in this subpart, you must achieve final compliance by October 4, 2004.

(b) If you close your incinerator but will restart it after October 4, 2004, you must have completed any needed emission control retrofits and meet the opacity limits of § 62.14815 on the date your incinerator restarts operation.

(c) You are subject to the operating permit requirements of title V of the CAA and 40 CFR part 70 or 71 until you close your air curtain incinerator and at the time you restart it.

§ 62.14810 What must I do if I plan to permanently close my air curtain incinerator and not restart it?

If you plan to permanently close your incinerator rather than comply with this subpart, you must submit a closure

notification, including the date of closure, to the Administrator by March 31, 2004. In addition, while still in operation, your air curtain incinerator is subject to the same requirement to apply for and obtain a title V operating permit that applies to an air curtain incinerator that will not be permanently closing.

§ 62.14815 What are the emission limitations for air curtain incinerators that burn 100 percent wood wastes, clean lumber and/or yard waste?

(a) After the date the initial test for opacity is required or completed (whichever is earlier), you must meet the limitations in paragraphs (a)(1) and (2) of this section.

(1) The opacity limitation is 10 percent (6-minute average), except as described in paragraph (a)(2) of this section.

(2) The opacity limitation is 35 percent (6-minute average) during the startup period that is within the first 30 minutes of operation.

(b) Except during malfunctions, the requirements of this subpart apply at all times, and each malfunction must not exceed 3 hours.

§ 62.14820 How must I monitor opacity for air curtain incinerators that burn 100 percent wood wastes, clean lumber, and/or yard waste?

(a) Use Method 9 of 40 CFR part 60, Appendix A to determine compliance with the opacity limitation.

(b) Conduct an initial test for opacity as specified in § 60.8 no later than January 2, 2005.

(c) After the initial test for opacity, conduct annual tests no more than 12 calendar months following the date of your previous test.

§ 62.14825 What are the recordkeeping and reporting requirements for air curtain incinerators that burn 100 percent wood wastes, clean lumber, and/or yard waste?

(a) Keep records of results of all initial and annual opacity tests onsite in either paper copy or electronic format, unless the Administrator approves another format, for at least 5 years.

(b) Make all records available for submittal to the Administrator or for an inspector's onsite review.

(c) Submit an initial report no later than 60 days following the initial opacity test that includes the information specified in paragraphs (c)(1) and (2) of this section.

(1) The types of materials you plan to combust in your air curtain incinerator.

(2) The results (each 6-minute average) of the initial opacity tests.

(d) Submit annual opacity test results within 12 months following the previous report.

(e) Submit initial and annual opacity test reports as electronic or paper copy on or before the applicable submittal date and keep a copy onsite for a period of five years

Title V Requirements

§ 62.14830 Does this subpart require me to obtain an operating permit under title V of the Clean Air Act?

If you are subject to this subpart, you are required to apply for and obtain a title V operating permit unless you meet the relevant requirements specified in 40 CFR 62.14525(a) through (h) and (j) through (o) and all of the requirements specified in 40 CFR 62.14531.

§ 62.14835 When must I submit a title V permit application for my existing CISWI unit?

(a) If your existing CISWI unit is not subject to an earlier permit application deadline, a complete title V permit application must be submitted not later than the date 36 months after promulgation of 40 CFR Part 60, subpart DDDD (December 1, 2003), or by the effective date of the applicable State, Tribal, or Federal operating permits program, whichever is later. For any existing CISWI unit not subject to an earlier application deadline, this final application deadline applies regardless of when this Federal plan is effective, or when the relevant State or Tribal section 111(d)/129 plan is approved by the EPA and becomes effective. See sections 129(e), 503(c), 503(d), and 502(a) of the Clean Air Act.

(b) A "complete" title V permit application is one that has been determined or deemed complete by the relevant permitting authority under section 503(d) of the Clean Air Act and 40 CFR 70.5(a)(2) or 71.5(a)(2). You must submit a complete permit application by the relevant application deadline in order to operate after this date in compliance with Federal law. See sections 503(d) and 502(a) of the Clean Air Act; 40 CFR 70.7(b) and 71.7(b).

Delegation of Authority

§ 62.14838 What authorities are withheld by the EPA Administrator?

The following authorities are withheld by the EPA Administrator and not transferred to the State or Tribe:

(a) Approval of alternatives to the emission limitations in table 1 of this subpart and operating limits established under § 62.14635 and table 2 of this subpart.

(b) Approval of petitions submitted pursuant to the requirements of § 62.14640 establishing operating parameters when using controls other

than a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and a wet scrubber.

(c) Approval of major alternatives to test methods established under § 62.14650 and table 1 of this subpart

(d) Approval of major alternatives to monitoring requirements established under § 62.14690, § 62.14605 and table 2 of this subpart.

(e) Approval of major alternatives to recordkeeping and reporting requirements of this subpart

(f) Approval of petitions submitted pursuant to the requirements of § 62.14530 establishing requirements for petitions and approvals of exemptions for chemical recovery units included in § 62.14525(n).

(g) Approval of requests submitted pursuant to the requirements in § 62.14625(b)(2).

Definitions

§ 62.14840 What definitions must I know?

Terms used but not defined in this subpart are defined in the Clean Air Act, subparts A and B of part 60 and subpart A of this part 62.

Administrator means the Administrator of the U.S. Environmental Protection Agency or his/her authorized representative or Administrator of a State Air Pollution Control Agency.

Agricultural waste means vegetative agricultural materials such as nut and grain hulls and chaff (e.g., almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds, and other vegetative waste materials generated as a result of agricultural operations.

Air curtain incinerator means an incinerator that operates by forcefully projecting a curtain of air across an open chamber or pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor. (Air curtain incinerators are different from conventional combustion devices which typically have enclosed fireboxes and controlled air technology such as mass burn, modular, and fluidized bed combustors.)

Auxiliary fuel means natural gas, liquified petroleum gas, fuel oil, or diesel fuel.

Bag leak detection system means an instrument that is capable of monitoring particulate matter loadings in the exhaust of a fabric filter (i.e., baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that

operates on triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

Calendar quarter means 3 consecutive months (non-overlapping) beginning on: January 1, April 1, July 1, or October 1.

Calendar year means 365 consecutive days starting on January 1 and ending on December 31.

Chemotherapeutic waste means waste material resulting from the production or use of antineoplastic agents used for the purpose of stopping or reversing the growth of malignant cells.

Clean lumber means wood or wood products that have been cut or shaped and include wet, air-dried, and kiln-dried wood products. Clean lumber does not include wood products that have been painted, pigment-stained, or pressure-treated by compounds such as chromate copper arsenate, pentachlorophenol, and creosote.

Commercial and industrial solid waste incineration (CISWI) unit means any combustion device that combusts commercial and industrial waste, as defined in this subpart. The boundaries of a CISWI unit are defined as, but not limited to, the commercial or industrial solid waste fuel feed system, grate system, flue gas system, and bottom ash. The CISWI unit does not include air pollution control equipment or the stack. The CISWI unit boundary starts at the commercial and industrial solid waste hopper (if applicable) and extends through two areas:

(1) The combustion unit flue gas system, which ends immediately after the last combustion chamber.

(2) The combustion unit bottom ash system, which ends at the truck loading station or similar equipment that transfers the ash to final disposal. It includes all ash handling systems connected to the bottom ash handling system.

Commercial and industrial waste, for the purposes of this subpart, means solid waste combusted in an enclosed device using controlled flame combustion without energy recovery that is a distinct operating unit of any commercial or industrial facility (including field-erected, modular, and custom built incineration units operating with starved or excess air), or solid waste combusted in an air curtain incinerator without energy recovery that is a distinct operating unit of any commercial or industrial facility.

Contained gaseous material means gases that are in a container when that container is combusted.

Cyclonic barrel burner means a combustion device for waste materials that is attached to a 55 gallon, open-

head drum The device consists of a lid, which fits onto and encloses the drum, and a blower that forces combustion air into the drum in a cyclonic manner to enhance the mixing of waste material and air.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation, operating limit, or operator qualification and accessibility requirements;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation, operating limit, or operator qualification and accessibility requirement in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Dioxins/furans means tetra-through octachlorinated dibenzo-p-dioxins and dibenzofurans.

Discard means, for purposes of this subpart and 40 CFR part 60, subpart DDDD, only, burned in an incineration unit without energy recovery.

Drum reclamation unit means a unit that burns residues out of drums (e.g., 55 gallon drums) so that the drums can be reused.

Energy recovery means the process of recovering thermal energy from combustion for useful purposes such as steam generation or process heating.

Fabric filter means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse.

Low-level radioactive waste means waste material which contains radioactive nuclides emitting primarily beta or gamma radiation, or both, in concentrations or quantities that exceed applicable Federal or State standards for unrestricted release. Low-level radioactive waste is not high-level radioactive waste, spent nuclear fuel, or by-product material as defined by the Atomic Energy Act of 1954 (42 U.S.C. 2014(e)(2)).

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused, in part, by poor maintenance or careless operation are not malfunctions.

Modification or modified CISWI unit means a CISWI unit you have changed later than promulgation of the final CISWI emission guidelines in 40 CFR part 60, subpart DDDD and that meets one of two criteria:

(1) The cumulative cost of the changes over the life of the unit exceeds 50 percent of the original cost of building and installing the CISWI unit (not including the cost of land) updated to current costs (current dollars). To determine what systems are within the boundary of the CISWI unit used to calculate these costs, see the definition of CISWI unit.

(2) Any physical change in the CISWI unit or change in the method of operating it that increases the amount of any air pollutant emitted for which section 129 or section 111 of the Clean Air Act has established standards.

Particulate matter means total particulate matter emitted from CISWI units as measured by Method 5 or Method 29 of 40 CFR part 60, Appendix A.

Parts reclamation unit means a unit that burns coatings off parts (e.g., tools, equipment) so that the parts can be reconditioned and reused.

Pathological waste means waste material consisting of only human or animal remains, anatomical parts, and/or tissue, the bags/containers used to collect and transport the waste material, and animal bedding (if applicable).

Rack reclamation unit means a unit that burns the coatings off racks used to hold small items for application of a coating. The unit burns the coating overspray off the rack so the rack can be reused.

Reconstruction means rebuilding a CISWI unit and meeting two criteria:

(1) The reconstruction begins on or after promulgation of the final CISWI emission guidelines in 40 CFR part 60, subpart DDDD.

(2) The cumulative cost of the construction over the life of the incineration unit exceeds 50 percent of the original cost of building and installing the CISWI unit (not including land) updated to current costs (current dollars). To determine what systems are within the boundary of the CISWI unit used to calculate these costs, see the definition of CISWI unit.

Refuse-derived fuel means a type of municipal solid waste produced by processing municipal solid waste through shredding and size classification. This includes all classes of refuse-derived fuel including two fuels:

(1) Low-density fluff refuse-derived fuel through densified refuse-derived fuel.

(2) Pelletized refuse-derived fuel.

Shutdown means the period of time after all waste has been combusted in the primary chamber.

Solid waste means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Federal Water Pollution Control Act, as amended (86 Stat. 880), or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923). For purposes of this subpart and 40 CFR part 60, subpart DDDD, only, solid waste does not include the waste burned in the fifteen types of units described in 40 CFR 60.2555 of subpart DDDD and § 62.14525 of this subpart.

Standard conditions, when referring to units of measure, means a temperature of 68 °F (20 °C) and a pressure of 1 atmosphere (101.3 kilopascals).

Startup period means the period of time between the Activation of the system and the first charge to the unit.

Tribal plan means a plan submitted by a Tribal Authority pursuant to 40 CFR parts 9, 35, 49, 50, and 81 that implements and enforces 40 CFR part 60, subpart DDDD.

Wet scrubber means an add-on air pollution control device that utilizes an aqueous or alkaline scrubbing liquor to collect particulate matter (including non-vaporous metals and condensed organics) and/or to absorb and neutralize acid gases.

Wood waste means untreated wood and untreated wood products, including tree stumps (whole or chipped), trees, tree limbs (whole or chipped), bark, sawdust, chips, scraps, slabs, millings, and shavings. Wood waste does not include:

(1) Grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands.

(2) Construction, renovation, or demolition wastes.

(3) Clean lumber.

Yard waste means grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs from

residential, commercial/retail,
institutional, or industrial sources as

part of maintaining yards or other
private or public lands

TABLE 1 OF SUBPART III OF PART 62.—EMISSION LIMITATIONS

For the air pollutant	You must meet this emission limitation ^a	Using this averaging time	And determining compliance using this method
Cadmium	0.004 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 29 of appendix A of part 60).
Carbon monoxide	157 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 10, 10A or 10B of appendix A of part 60).
Dioxins/furans (toxic equivalency basis).	0.41 nanograms per dry standard cubic meter.	3-run average (4 hour minimum sample time per run).	Performance test (Method 23 of appendix A of part 60).
Hydrogen chloride	62 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 26A of appendix A of part 60).
Lead	0.04 milligrams per dry standard cubic meter.	3-run (1 hour minimum sample time per run).	Performance test (Method 29 of appendix A of part 60).
Mercury	0.47 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 29 of appendix A of part 60).
Opacity	10 percent	6-minute averages	Performance test (Method 9 of appendix A of part 60).
Oxides of nitrogen	388 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Methods 7, 7A, 7C, 7D, or 7E of appendix A of part 60).
Particulate matter	70 milligrams per dry standard cubic meter.	3-run average (1 hour minimum sample time per run).	Performance test (Method 5 or 29 of appendix A of part 60).
Sulfur dioxide	20 parts per million by dry volume.	3-run average (1 hour minimum sample time per run).	Performance test (Method 6 or 6c of appendix A of part 60).

^aAll emission limitations (except for opacity) are measured at 7 percent oxygen, dry basis at standard conditions

TABLE 2 OF SUBPART III OF PART 62.—OPERATING LIMITS FOR WET SCRUBBERS

For these operating parameters	You must establish these operating limits	And monitor using these minimum frequencies		
		Data measurement	Data recording	Averaging time
Charge rate	Maximum charge rate	Continuous	Every hour	1. Daily (batch units) 2. 3-hour rolling (continuous and intermittent units) ^a
Pressure drop across the wet scrubber or amperage to wet scrubber	Minimum pressure drop or amperage	Continuous	Every 15 minutes	3-hour rolling ^a
Scrubber liquor flow rate	Minimum flow rate	Continuous	Every 15 minutes	3-hour rolling ^a
Scrubber liquor pH	Minimum pH	Continuous	Every 15 minutes	3-hour rolling ^a

^aCalculated each hour as the average of the previous 3 operating hours.

TABLE 3 OF SUBPART III OF PART 62.—TOXIC EQUIVALENCY FACTORS

Dioxin/furan congener	Toxic equivalency factor
A. 2,3,7,8-tetrachlorinated dibenzo-p-dioxin	1
B. 12,3,7,8-pentachlorinated dibenzo-p-dioxin	0.5
C. 1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin	0.1
D. 1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin	0.1
E. 12,3,6,7,8-hexachlorinated dibenzo-p-dioxin	0.1
F. 1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin	0.01
G. Octachlorinated dibenzo-p-dioxin	0.001
H. 2,3,7,8-tetrachlorinated dibenzofuran	0.1
I. 2,3,4,7,8-pentachlorinated dibenzofuran	0.5
J. 1,2,3,7,8-pentachlorinated dibenzofuran	0.05
K. 1,2,3,4,7,8-hexachlorinated dibenzofuran	0.1
L. 1,2,3,6,7,8-hexachlorinated dibenzofuran	0.1
M. 1,2,3,7,8,9-hexachlorinated dibenzofuran	0.1
N. 2,3,4,6,7,8-hexachlorinated dibenzofuran	0.1
O. 1,2,3,4,6,7,8-heptachlorinated dibenzofuran	0.01
P. 1,2,3,4,7,8,9-heptachlorinated dibenzofuran	0.01
Q. Octachlorinated dibenzofuran	0.001

TABLE 4 OF SUBPART III—SUMMARY OF REPORTING REQUIREMENTS^A

Report	Due date	Contents	Reference
A. Waste Management Plan	No later than April 5, 2004	Waste management plan	§ 62.14715.
B. Initial Test Report	No later than 60 days following the initial performance test.	1. Complete test report for the initial performance test. 2. The values for the site-specific operating limits. 3. Installation of bag leak detection systems for fabric filters	§ 62.14720.
C. Annual report	No later than 12 months following the submission of the initial test report. Subsequent reports are to be submitted no more than 12 months following the previous report.	1. Name and address 2. Statement and signature by responsible official. 3. Date of report. 4. Values for the operating limits. 5. If no deviations or malfunctions were reported, a statement that no deviations occurred during the reporting period. 6. Highest recorded 3-hour average and the lowest 3-hour average, as applicable, for each operating parameter recorded for the calendar year being reported. 7. Information for deviations or malfunctions recorded under § 62.14700(b)(6) and (c) through (e). 8. If a performance test was conducted during the reporting period the results of the test. 9. If a performance test was not conducted during the reporting period a statement that the requirements of § 62.14680(a) or (b) were met. 10. Documentation of periods when all qualified CISWI unit operators were unavailable for more than 8 hours but less than 2 weeks.	§§ 62.14725 and 62.14730. Subsequent reports are to be submitted no more than 12 months following the previous report.
D. Emission Limitation or Operating Limit Deviation Report.	By August 1 of that year for data collected during the first half of the calendar year. By February 1 of the following year for data collected during the second half of the calendar year.	1. Dates and times of deviations 2. Averaged and recorded data for these dates. 3. Duration and causes for each deviation and the corrective actions taken. 4. Copy of operating limit monitoring data and any test reports. 5. Dates, times, and causes for monitor downtime incidents. 6. Whether each deviation occurred during a period of startup, shutdown or malfunction.	§§ 62.14735 and 62.14740.
E. Qualified Operator Deviation Notification	Within 10 days of deviation	1. Statement of cause of deviation. 2. Description of efforts to have an accessible qualified operator. 3. The date a qualified operator will be accessible.	§ 62.14745(a)(1)
F. Qualified Operator Deviation Status Report	Every 4 weeks following deviation	1. Description of efforts to have an accessible qualified operator. 2. The date a qualified operator will be accessible. 3. Request for approval to continue operation.	§ 62.14745(a)(2)
G. Qualified Operator Deviation Notification of Resumed Operation.	Prior to resuming operation	Notification that you are resuming operation.	§ 62.14745(b).

^A This table is only a summary. see the referenced sections of the rule for the complete requirements.

